tomas from pressure by a Murphy button may predispose to ulceration but can scarcely induce it alone in the absence of hyperacidity

The Schick Reaction in Prophylaxis—Armand-Delille and Marie found 37 5 per cent positive reactions to the Schick test for susceptibility to diphtheria in 200 children in various orphan asylums This and similar experiences suggest, they say, the advisability of applying the Schick test regularly to children on entering school, recording the response on each child's card, and also applying the test to new recruits entering the barracks

Bulletin Medical, Paris

June 16 26 1920 34 Nos 31 33

Arsphenamin by Subcutaneous Injection Emery and Morin —p 549
Advantages of Kaolin in Diarrhea R Guillermin —p 551
Mongolism F Apert —p 563
*Uterine Fibromas A Cauchoix —p 581
Conservative Surgery for Uterine Fibromas J Okinczyc —p 585
*Roentgen Ray Treatment of Fibromas J Belot —p 589
*Radium Treatment of Fibromas J Gagey —p 592

Uterine Fibromas—The issue of the *Bulletin* for June 26, No 33, is devoted entirely to uterine fibromas Cauchoix reviews the indications for and against the various methods of treatment, saying that Menard has recently reported three cases in which conception occurred during roentgen-ray treatment of fibromas, with normal course and termination of the pregnancy, confirming Stern s statement that raying the ovaries does not prevent pregnancy later Before radiotherapy in any form is applied thorough examination is necessary, as it is liable to whip up beginning necrosis or malignant degeneration Begouin has reported a fatal case of activation of incipient necrosis Concomitant lesions elsewhere in the uterus or adnexa were found by Fredet in fifty-three of his 121 fibroma cases and by Baudet in fifty-seven of 130 In all cases of fibroma signs of myocarditis should be sought, and this decides the indications for treatment Toxic insufficiency of the kidneys is comparatively common with fibromas the indications with this are the same as with heart disease

Roentgen-Ray Treatment of Uterine Fibromyomas—Belot states that Foveau de Courmelles was the pioneer in this method of treatment publishing his results in January 1904 The statistics from various countries cited by Belot show that the mortality after surgical intervention for uterine fibromas is a little higher than the number of cases which prove refractory to radiotherapy From 95 to 96 per cent of cures can be counted on with the latter He declares that there is no evidence that raying can transform a fibroma into a cancer while on the other hand there is constantly accumulating evidence that radiotherapy may cure cancer of the uterus As Delbet expresses it 'The fibroma, fleeing from the knife melts away under the rays from the roentgen tube

Radium Treatment of Uterine Fibromas—Gagey extols the superiority of radium for treatment of small fibromas not larger than the ovum of a three or four months' pregnancy This is the special field for radium He adds that unless there is latent adnexitis which might flare up radium treatment is absolutely harmless

July 10 1920 34 No 35

*Alimentary Anaphylaxis G Laroche C Richet Jr and F Saint Girons —p 625
Vomiting of Infants J Genevrier —p 629

Alimentary Anaphylaxis—Richet and his co-workers have apparently recently demonstrated by humoral reactions the anaphylactic origin of certain cases of chronic gastroenteritis From the clinical standpoint loss of flesh is an important symptom of alimentary anaphylaxis, but as this occurs with ordinary dyspepsia it does not aid in differentiating It is possible that the two are usually combined, this hypothesis seems to be sustained by the infants who are unable to digest any kind of milk but thrive on change to other food and develop acute gastro-intestinal disturbance anew on return to milk regardless of the small amount ingested Every pediatrician has seen such cases, they seem to testify to a sensitization which is the main characteristic of anaphylaxis It has cleared up the matter considerably to substitute the term "alimentary anaphylaxis" for the vague terms "idiosyncrasy" and "digestive intolerance" as the former has well defined experimental and biologic criteria in acute and in certain cases of minor anaphylaxis and we may soon discover such for dissociated hereditary and chronic anaphylaxis Even without them we are reaping a harvest by discovering and dropping the toxic article of food and then overcoming the extra susceptibility by training the digestive tract to bear such substances without harm The most convenient method for this is to take 0 5 gm of peptone an hour before meals In children the pancreatic ferment plus pepsin may be required as the pancreatic ferment seems to be the only one of the digestive juices which transforms albumin and annuls its anaphylaxis-producing properties In Nathan's case of intolerance for eggs, the stools revealed insufficiency of pancreas function and under pancreas treatment the boy could eat eggs but the anaphylaxis reappeared whenever the organotherapy was suspended A dose of 5 mg of quinin plus 0 5 gm of sodium bicarbonate taken an hour before the ordinary dose of quinin, may banish completely an "idiosyncrasy' to quinin, preventing effectual treatment of malaria

Bulletins de la Societe Médicale des Hôpitaux, Paris

May 21 1920 44 No 18

Iodin Internally in Treatment of Tuberculous Glands H Dufour —p 693
Treatment of Pulmonary Tuberculosis H Dufour —p 695
*Treatment of Jaundice P Emile Weil —p 697
Myelocythemia in Influenza G Lion and A Cretin —p 703
Superior Gravity of Influenza in Girls E Apert —p 706
Epidemic Encephalitis L Lortat Jacob and others —p 707 708 730 734 738
Schick Diphtherin Test in the Army Rieux and Zoeller —p 717
*Autoserotherapy in Hay Fever Urticaria etc C Achard and C Flandin —p 723
Hyperhidrosis After Shell Shock L Boudon and A Rouquier —p 732
Posterior Tibiofemoral Reflex in Sciatica G Guillain and J A Barre —p 737

Treatment of Jaundice—Weil reported in 1915 his success in treating typhoid with a solution of sugar, plus epinephrin given by the drop method His experience since with it has been favorable in all infectious diseases with the exception of dysentery But his success he says has been most brilliant with this method in catarrhal and toxic jaundice For this he uses a liter of tepid water containing 45 gm of sugar and 1 5 gm of hexamethylenamin The diuresis increases at once by the fourth day reaching usually 3 liters and keeping at 3 or 4 liters while the treatment is continued The jaundice disappears and the pruritus, but the bradycardia is seldom and not much influenced This treatment is often effectual also in jaundice from gallstones sometimes rendering operative measures unnecessary

Autoserotherapy in Urticaria, Hay-Fever, etc—Achard and Flandin state that in conditions in which the factor of anaphylaxis is evident, the serum acquires what they call cryptotoxic properties, and can be utilized to desensitize They give it in minute doses below the level of those inducing shock or even the hemoclasic crisis injecting subcutaneously 0 5 c c of the autoserum, twelve hours later, 1 c c and the next day 1 or 2 c c , 2 c c the following day, and then every second or third day Recurring urticaria, angioneurotic edema and hay-fever yielded promptly to this treatment, but little effect was apparent in asthma Their experience with hay-fever has been limited but one case cured in 1918 had only very slight symptoms the following year The effect of this treatment is not like that of ordinary serotherapy but seems to be an actual desensitization

Lyon Medical

May 10 1920 129, No 9

*Peptic Jejunal Ulcer A Delore —p 381
Associations of Drugs B Lyonnet and R Boulud —p 417

Peptic Ulcer—Delore refers to peptic ulcers after a gastro-enterostomy and says that he has had three cases in which all errors in technic can be confidently excluded He remarks that gastric ulcer frequently coincides with tuberculosis, in one of his cases, the resected gastric ulcer and

the recurring ulcer in the stomach were both of tuberculous nature, and the patient succumbed to pulmonary tuberculosis not long afterward This is another argument he says, in favor of resection of gastric ulcer As the peptic ulcer is liable to perforate into the peritoneum at any moment, no time should be wasted on medical measures

Presse Medicale, Paris

June 16 1920, **28**, No 40

*Practical Interest of Stercobilin M Brule and H Garban —p 393
*Urea in Spinal Fluid in Epilepsy G Laures and E Gascard —p 396

June 19 1920 **28**, No 41

Inaugural Lecture of Surgical Pathology Course A Gosset — p 401

Elements of the Bile in Estimation of Liver Functioning—Brule and Garban deny the enterohepatic theory of urobilinuria sustained by Labbe and Carrie (See recent abstract July 24, page 277) They claim that with complete arrest of the passage of bile into the bowel the bilirubin in the blood may become transformed into urobilin This may pass into the urine without the participation of the bowel in any respect and thus without the presence of stercobilin in the feces or only in small amounts not commensurate with the intensity of the urobilinuria and irregularly, not paralleling the latter The presence of stercobilin in these conditions does not testify that the bile is passing directly into the bowel It may be shut off completely by obstruction of the biliary passages or some lesion in the liver, and yet stercobilin may pass through the mucosa into the feces Elimination of the bile pigments is difficult to measure and interpret and it is more instructive to study the excretion of the bile salts This can be readily estimated by the blood dust, two or three hours after a meal

Urea Content of Spinal Fluid in Epilepsy—Laures and Gascard tabulate the findings in six epileptics during an epileptic seizure and also during the intervals also in six men with pronounced hysteria, and in two with what has been called hystero epilepsy which later proved to be merely abortive epilepsy The figures cited show a marked rise in the urea content of the cerebrospinal fluid during an epileptic seizure and a marked drop in the urea content in an attack of hysteria The chlorid content did not show any variation in either group

June 23 1920 **28**, No 42

*Sheath Forming Osteitis L Renon and E Geraudel —p 413
Abuse of Subcutaneous Injections of Camphor L Cheinisse —p 416

Sheath-Forming Osteitis—Renon and Geraudel give radiograms from a case of what is usually called Marie's hypertrophic pulmonary osteo-arthropathy This latter term is misleading as only the shafts of the bones are involved the joints being spared The photomicrograms show a double process in the bones the production of a sheath of spongy new bone and calcification of the intercellular fibrillar and interfibrillar substances In the case reported in detail all the long bones were thus ensheathed, the whole apparently coming on in the course of six or seven months in a man of 66 with chronic pneumonia complicated with cancer of the lung They have found five similar cases on record The bones contain more fat than usual but the calcium and magnesium content seemed to be normal Radioscopy shows the essentially irregular bone sheath and in all the cases on record the connection with disease of the lung was unmistakable but hippocratic fingers do not belong to this type

June 26 1920 **28** No 43

*Treatment of Stenosis of the Esophagus J Guisez —p 421
The Oscillometer Ratio E May —p 423
Protective Inoculation against Influenza P Pagniez —p 426

Stenosis of the Esophagus—Guisez concludes his illustrated article with the statement that endoscopy alone generally suffices to restore the permeability of the esophagus even when the stenosis is so complete that the patient is unable to swallow fluids including his own saliva Passage of a filiform bougie under direct visual control is the key to the whole wider and wider bougies being used If this fails gastrotomy is imperative this alone, by resting the esophagus may later allow the passage of the filiform He warns that it is useless to try to introduce the filiform from below if it cannot be introduced from above under the endoscope If this does not succeed then the esophagus is absolutely impermeable as proved to be the case in two of his 135 cases of grave stenosis

The Oscillometer Ratio of the Blood Pressure—The Pachon oscillometer imparts useful information by the amplitude of its oscillations but this oscillometer index is the result of several factors Dividing this index by the difference between the maximal and the minimal pressure, gives what May calls the oscillometer ratio This records exclusively the vascular elements in the pulse, and is thus very instructive in certain conditions

June 30 1920 **28** No 44

*Technic for Gastrectomy T de Martel —p 433
The Oscillometer Index in Asthenia and Mania R Benon and M Leinberger —p 436

Gastrectomy—De Martel places the patient with the upper part of the trunk horizontal the rest of the body sloping at an angle of 45 degrees His incision is on the median line, from xiphoid appendix to umbilicus If this is not enough he continues it horizontally to the right this L allowing ample access to the pyloric end of the stomach, gallbladder etc The special instrument he uses clamps the entire width of the stomach the pressure intensified by a vise device The suturing can be done through lengthwise slits in the clamp He prepares the patient by having the teeth put in order and daily lavage of the stomach to accustom him to the stomach tube after the operation The article is profusely illustrated

Progrès Medical, Paris

May 29 1920 **35** No 22

Treatment of Conceptional and Infantile Syphilis L Bory —p 237
Harmony Synergy and Reflected Action in Digestion M Loeper —p 239
Hydrochloric Acid in Therapeutics G Faroy —p 243

June 19 1920 **35** No 25

*Clot in Mitral Stenosis P Blum and H Lux —p 269
Examination for Venereal Disease Queyrat —p 270
Intestinal Neuralgia and Neuritis and Courses of Mineral Waters P Froussard —p 273
Encephalitis or Hysteria? M Briand and A Rouquier —p 274

Thrombosis with Mitral Stenosis—Blum and Lux describe the characteristic modification of the sounds with mitral stenosis when thrombosis complicates the clinical picture In the case reported in a woman of 33 small emboli from it were found in the radial, mesenteric and renal arteries and elsewhere If diagnosed in time the clot might be extracted

June 26 1920 **35**, No 26

*Etiology of Psoriasis L Bory —p 281
Acute Nephritis in Young Children Hutinel —p 285
Tabes and Courses of Mineral Waters Mace de Lepinay —p 287

Etiology of Psoriasis—Bory reviews the evidence in favor of the nervous or parasitic origin of psoriasis In his 129 cases in soldiers over 80 per cent were of recent development and only in twenty-six of the cases did the first appearance date from before the age of 20 The evidence points strongly to tuberculosis that is, to an infectious or parasitic origin

Schweizerische medizinische Wochenschrift, Basel

June 17 1920 **50** No 25 Swiss Surgical Congress Number

Neurotomy for Trigeminal Neuralgia Perret —p 485
*Nerve Anastomosis for Facial Paralysis Perret —p 485 Idem E Kummer —p 489
Remote Results of Bone Grafting in Jaw Julliard —p 492
Perthes Disease Grob —p 493
Surgery of War Wounds of the Thorax H Patchoud —p 496
*Roentgen Ray Treatment of Surgical Tuberculosis H Feldmann —p 499
Treatment of Tuberculous Epididymitis H Wildbolz —p 506
*Antisepsis with Gases F Steinmann —p 509
Reconstruction of Larynx and Trachea K Henschen —p 512
*Resection of Vagus in Stomach Disease E Bircher —p 519
Tardy Chloroform Fatalities in Liver Disease F Brunner —p 528
Electrocoagulation of Bladder Papillomas F Suter —p 529

Neurotomy for Trigeminal Neuralgia—Perret's illustrated description is of the case of a man of 70 who had suffered agonies from trigeminal neuralgia for twenty years with intervals of transient relief from injection of alcohol and other measures Perret finally cured it completely by severing the nerve back of the gasserian ganglion This isolated

the ganglion by the ascending degeneration of the centripetal fibers of the sensory root, but it left intact the nerve ramification passing from the cavernous plexus to the gasserian ganglion, and also the ophthalmic nerve Hence there was no danger of neuroparalytic keratitis The cure has been complete during the three and a half years to date

Anastomosis of Nerves for Facial Paralysis—Perret and Kummer each gives illustrations of a successful case of the kind in a young woman

Roentgen-Ray Treatment of Surgical Tuberculosis—Iselin analyzes the experiences at Basel 1907-1914 with 1,133 cases They confirm the possibilities of conservative treatment, especially the extraordinarily favorable prognosis under roentgen-ray treatment It is useful as an adjuvant to operative measures Iselin emphasizes that he is a surgeon not a radiologist, but he regards well planned roentgen-ray treatment as a fine foundation for conservative treatment Old tuberculous processes yield earlier and more completely to the rays than young and active ones The efficacy of the rays is seen particularly in the disappearance of tuberculous lesions in glands, omentum, soft parts and joints of many years' standing, and by the reduction of the virulence of the pus from abscesses in experimental lesions The ambulatory treatment and the noninterference with the earning capacity compensate for the length of the course

Gaseous Antisepsis—Steinmann asserts that his apparatus allows a constant stream of oxygen plain or medicated to play on the suppurating tissues or a jet of air passed through chloroform or other antiseptic He says that the jet of air passed through chloroform killed lice nits, bacteria, and even anthrax spores in three minutes

Reconstruction of Larynx and Trachea—Henschen's long article concludes with the assertion that the surgeon with even the technic now available is able to restore the permeability of the trachea and larynx in a most satisfactory manner in the majority of cases, either by a plastic covering or enlarging operation total plastic operation or complete reconstruction of the larynx and trachea He gives a page of plates showing the means for plastic reconstruction of the constricted or obliterated larynx and trachea

Resection of the Vagus in Stomach Affections—Bircher presents evidence to sustain the importance of the neurotic factor in stomach disturbances and especially in the development of gastric ulcer A gastric neurosis alone without anatomic findings may simulate completely the picture of a gastric ulcer When the stomach has been opened up in such a case and no anatomic lesion discovered, surgeons usually conclude the intervention with gastro-enterostomy and let it go at that But with a sagging stomach the gastro-enterostomy may entail more serious disturbances than ever even without the so-called vicious circle, and Bircher thinks it is more logical to resect the vagus fibers innervating the body of the stomach and the pylorus region This will eliminate the neurotic element just as we influence exophthalmic goiter by resecting the thyroid He tabulates the details of eleven cases in which he has done this with surprisingly favorable and permanent results It arrests hypersecretion and pylorospasm and the motor functioning returns to approximate normal He has been surprised to find further that ptosis and atony also subsided The conception of vagotony has been rather discredited of late but his experiences have strengthened the conception anew The cardia is not molested as disturbances in this region are rare, but three or four fibers of the vagus on the upper margin of the lesser curvature are isolated torn out both distally and proximally, and cut across He reaches the fibers on the posterior wall of the stomach through the greater omentum between the stomach and colon thus exposing the whole rear of the stomach and removes in the same way the fibers entering the fundus In one case the vagus resection was done for recurring vomiting but as a rule the indications were excessive secretion or peristalsis

June 24 1920 **50,** No 26

Treatment of Gonorrhea B Bloch—p 533
Slight Rise in Temperature in the Tuberculous H J A van Voorn veld—p 559 Concl in No 27 p 567
*Roentgen Ray Treatment of Pituitary Tumors M Steiger—p 542

Roentgen-Ray Treatment of Pituitary Tumors—Steiger adds another to the twenty cases he has compiled from the literature in which the pituitary was systematically exposed to the roentgen rays, all with satisfactory or brilliant success His patient was a woman of 32 who for seven years had had occasional headaches and for the last four years there had been impairment of vision in the right eye and for a year and a half in the left Recently the headaches had become severer, spreading to the forehead, orbits and back of the nose A tendency to acromegaly was manifest, and the shadow of the sella turcica was abnormally large The right papilla seemed to be completely atrophied and this eye was almost totally blind the left had vision of 0 6 after correction 0 15 before The roentgen rays were applied in crossfire from seven fields for fifteen minutes each, from the brow temples and anterior fontanel, and by the second sitting vision was materially improved Fourteen exposures were made in the course of four months, and vision constantly improved in the left eye and the right was able to recognize objects A year later the acromegaly had almost completely subsided, but menstruation had not returned Treatment with pituitary extract is now planned

Policlinico, Rome

June 21 1920 **27,** No 25

Sugar Content of the Blood S Silvestri and G Aiello—p 643
Epidemic Encephalitis V Ronchetti—p 646

May 1920 **27** Medical Section No 5

*Tests for Glycuronic Acid in the Urine G Sabatini—p 149
*Clinical Significance of Glycuronuria G Lorenzani—p 174
*Elimination of Chlorids in Fevers G Marcialis—p 184 Conclusion

Tests for Glycuronic Acid in the Urine—Sabatani tabulates the findings with different tests in 141 applications in sixty-eight persons healthy, tuberculous, or with various other grave diseases Fever did not seem to influence the findings, but the diet modified them Administration of camphor elicited a positive response with the naphthoresorcin test but not with the alphanaphthol test, confirming the diverse significance of these tests He commends his modification of the latter test

Significance of Glycuronuria—Lorenzani remarks that colorimetry is reliable enough for estimation of glycuronuria He found it more pronounced the greater the accumulation of toxic matters in the organism In seven typhoid patients with diarrhea the range was from 0 018 to 0 0955, while in seven typhoid cases of the constipated type, the range was from 0 072 to 0 3574

Elimination of Chlorids in Fever—Marcialis concludes his long study of this subject with the statement that the retention of chlorids in fever seems to be a defensive process, so that the chlorids may attenuate the toxicity of the poisons in the blood stream Sodium chlorid by the mouth never induced fever in adults in his experiments

April May 1920 **27,** Surgical Section No 4 5

Rupture of Intestine from Contusion of Hernia N Novaro—p 113
Hydatid Cyst in Kidney Grows Through Diaphragm Pietri—p 121
*Exophthalmic Goiter B Schiassi—p 126
*Unusual Case of Renal Calculus G Vito Tardo—p 145

Exophthalmic Goiter—Schiassi presents charts showing the vicious circle set up by abnormal conditions in the cerebellum, sympathetic nervous system and the thyroid, which finally involves other ductless organs But he explains that in true exophthalmic goiter the thyroid is primarily affected, the disturbance in the secretion leads to toxemia which may prove fatal unless the vicious circle is broken up in time When the thyroid is only secondarily involved, the disturbance is never so severe With this latter form there may be periods of health alternating with periods of symptoms over many years but they never prove fatal This is the type of cases that are called *formes frustes* of exophthalmic goiter, but this is a misnomer, it is not an abortive form but merely presents a few of the symptoms An instructive instance cited to show the interrelations between the endocrine glands is that of a physician who injured the thyroid by running into a clothesline in the dark The swelling and pain in the thyroid and palpitations were accompanied by swelling and pain in the testicles, and priapism Sexual excitement was accompanied by pain in both testicles and the thyroid

Renal Calculus—Tardo gives illustrations of a renal calculus which weighed 804 gm. There had been pain in the kidney at times from early childhood but nephrectomy did not become necessary till the age of 38.

Riforma Medica, Naples

May 29 1920 **36** No 22

Indications with Cancer of the Pylorus D Giordano—p 501
*Status Hypoplasticus N Pende and V Fici—p 504
Epidemic Encephalitis O d'Allocco—p 507
Fracture of the Skull E Arevoli—p 509

Associated Hypoplastic Constitution with Megacolon—Pende and Fici comment on the light liable to be thrown on the origin of malformations when several occur in the same person, and describe a case of status hypoplasticus with diffuse gliosis of the spinal cord and congenital megacolon. The latter had caused no special disturbances except a tendency to rebellious constipation, until the age of 36 when ileus developed, rapidly fatal.

Rivista di Clinica Pediatrica, Florence

May 1920 **18** No 5

*Congenital Fragility of the Bones G Frontali—p 257

Congenital Fragility of the Bones.—Frontali's article is accompanied with a number of colored plates and other illustrations of a case of pure fragilitas ossium in which the long bones were composed entirely of spongy tissue without any compact bone. The spongiosa showed the embryonal type, without lamellae or haversian system. The number of osteoblasts was below normal but the lower layer of the periosteum was calcified, and cast a shadow simulating that of compact bone. The calcium balance and calcium content of the blood were normal, and the infant looked well nourished when it died at the age of 3½ months. There were evidences of thirty-three fractures and the thymus presented extreme atrophy and sclerosis but the other endocrine glands seemed normal. He urges examination of the thymus in all cases of fragility of the bones with thymus treatment possibly by injection of serum from children with a functionally capable thymus. He adds an extensive bibliography on the subject, comparing his case with those on record.

Anales de la Facultad de Medicina, Lima

March April 1920 **3**, No 14

*Measles and Rubeola J Arce—p 103
Modern Views on Epilepsy C A Bambaren—p 118 Cont'd
Case of Traumatic Paralytic Neurokeratitis E Campodonico and J S Losno—p 143
*Sudden Deaths in Peru F Quesada—p 152 Begun in No 11 p 113
Epidemic Encephalitis M Gonzalez Olaechea—p 166
Language and Speech L D Espejo—p 173 Cont'n
Reactions that Distinguish Balsam of Peru from Other Balsams M A Velasquez and A Maldonado—p 207

Measles Versus Rubeola—Arce reports a few cases which show that the mononucleosis which some regard as pathognomonic of rubeola may be absent and in its place may be found an ordinary polynuclear leukocytosis which is generally assumed to be typical of measles. When both measles and rubeola are epidemic as has been the case recently at Lima, there do not seem to be any reliable features to differentiate them, not even Koplik's spots are dependable. The only symptom which he found exclusively in rubeola was the swelling of the epitrochlear lymph nodes. These nodes rarely enlarge with general infections and Lesieur and Jacquet have called attention to this adenopathy as characteristic of rubeola. He has never found the glands enlarged except in rubeola and in Peruvian verruca. This polyadenitis is one of the earliest signs of this latter disease. The postcervical lymph nodes may enlarge in rubeola, this was he case in some of his patients, the swollen and painful gland as large as a chick-pea.

Sudden Deaths—Quesada's article is a review of a large number of sudden deaths most of them the result of congestion of the lung in alcohol addicts at the onset of cold weather. The other cases were mostly due to heart failure with chronic heart and kidney disease or to hemorrhagic malaria. He comments on the remarkable preponderance of the unmarried in these cases of sudden death and the very small proportion of women among them. The ages from 40 to 49 and from 60 to 69 seem to be the most predisposed to sudden death, nearly all the subjects were working men.

Brazil-Medico, Rio de Janeiro

May 15 1920 **34** No 20

*Cartilage in Autografts on the Skull P C de Andrade—p 309
Trachoma in Interior of Brazil Linneu Silva—p 310

Cartilage Implants in Cranioplastics—The case of which an illustrated description is given by de Andrade confirms anew the advantages of cartilage autografts to repair a gap in the skull. The defect in this case was the result of recurring suppuration.

May 22 1920 **34** No 21

Technical Terms in Otology J Adeodato—p 321
*The Thalamic Syndrome with Cerebral Arteriosclerosis R Teixera Mendes—p 324

Disease of the Thalamus—Teixera differentiates three types: the pure thalamic syndrome, the mixed thalamic syndrome and the thalamic status and describes a case of the latter type in which arteriosclerosis was evidently a factor. The first symptom fifteen years before had been sensations of heat in the hands, compelling the woman to bathe her hands frequently in cold water. Then came great debility and inability to lift or even grasp objects with other symptoms of thalamus derangement. She is now 63.

Gaceta Médica de Caracas

March 15 1920 **27** No 5

The Mineral Waters of Caracas L G Chacin Itriago—p 53

March 31 1920 **27** No 6

Experiences with Tartrate of Antimony and Potassium in Treatment of Bilharziasis Mansoni Martin Vegas—p 69
*Untoward By-Effects from Treatment with Tartrate of Antimony and Potassium I R Risquez—p 74
Sagging Spleen Simulating Ovarian Tumor Splenectomy L Razetti—p 75

By-Effects from Tartrate of Antimony and Potassium—Risquez reports that the patient was apparently doing well under a systematic course of treatment with tartar emetic for bilharziasis when suddenly after injection of 0.09 gm. of the drug he developed chills and contractures and pains in the muscles. The chill, intense tremor and the aspect were like those of severe malaria and the temperature ran up to 104 F. with vomiting but under repose, rubbing with camphorated oil and hot drinks a purge and an emetic, he recovered. The pain and soreness of the muscles continued for several days. The patient said he felt as if he had just had a severe illness. By the end of the week he had quite recovered and wanted to go on with the injections.

Semana Medica, Buenos Aires

March 25 1920 **27** No 13

Diagnosis and Treatment of Poisoning O B Montes—p 418
Ravages of Syphilis in the Population and Prophylaxis A Bergman—p 427 Idem M Helman—p 433
Fats in Metabolism E Fynn—p 429
Prophylaxis of Suicide R Bosch Jr—p 431
Changes in Emotional Responses as Early Sign of Dementia Praecox E Coni Mataro—p 436
General Principles of Treatment of Gonorrhea F Castano—p 437
*Plantar Hyperhidrosis J A Lopez—p 443

Excessive Sweating of the Feet.—Lopez discusses this subject from the military standpoint and his success in curing plantar hyperhidrosis in soldiers with a dusting powder consisting of 60 parts alum to 40 parts talcum powder. This reduced or checked completely the excessive sweating eliminated the bad odor and prevented maceration etc. from the sweat while saving the shoes from the constant moisture. He ascribes the cause of the hyperhidrosis and certain vasomotor phenomena chilblains varices hemorrhoids and similar minor disturbances to some general toxic action and thinks that incipient attenuated tuberculosis is responsible for this in many cases. He says that general treatment by the Argentine method of extremely minute doses of tuberculin may be worth a trial or with Ferran's antialpha sero therapy or vaccine.

Archiv fur Kinderheilkunde, Stuttgart

Oct 11, 1919 **67**, No 5 6

Nutritional Disturbances in Infants Due to Protein J Adler —p 321
Suppuration in Urinary Tract in Children J Duken —p 345
Phantom for Teaching Intubation D Sokolow —p 354
Syphilis Inherited by Only One Twin Grete Singer —p 362
Normal Horse Serum in Experimental Diphtheria W Kastenmeyer —p 365
The Blood in Scurvy Hedwig Brandt —p 395
*Pseudobulbar Paralysis in Children Hedwig Dibbelt —p 414
*Fever Treatment of Vulvovaginitis in Children Hertha Schulz —p 429
*Age Limits for Spasmophilia E Klose —p 439
Congenital Defect in Parietal Bone H Eckhardt —p 444

Pseudobulbar Paralysis—Dibbelt describes the cases of two children of 6 and 8 with spastic diplegia of a severe form, either congenital or developing soon after birth There were no eye symptoms and the intelligence was normal In the thirteen cases on record with necropsy findings, some defect in the cortex was apparent Treatment must be essentially orthopedic, strengthening the antagonist muscles, with possibly surgical measures for spastic contracture Indefatigable patience and perseverance are indispensable to train other centers to substitute the lacking cortical centers

Thermal Treatment of Vulvovaginitis—Schulz applied to twenty little girls Weiss method of deep hot baths in treatment of gonococcus processes Notwithstanding a few instances of transient benefit, she was obliged to abandon this treatment on account of the by-effects delirium, syncope and even convulsions in some of the children From fifteen to twenty baths were given each for twenty or thirty minutes every day or second day The children complained of violent headache and abdominal pains and fought to climb out of the hot water, from 38 C the temperature was raised to 40 or 44 C (104 or 111 F)

Age Limit for Spasmophilia—Klose argues that it is impossible for spasmophilia to develop in infants less than 2 months old This is the limit below which manifest tetany cannot develop

Beitrage zur klinischen Chirurgie, Tubingen

1920 **119**, No 2

*Postoperative Thrombo Embolism Capelle —p 485
Surgery of Chest Garre's Clinic 300 Cases T Naegeli —p 518
Unilateral Exclusion of Part of Intestine H Finsterer —p 554
Contusion of the Liver H Finsterer —p 598
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Postoperative Thrombo-Embolism.—Capelle analyzes 15 cases at Garre's clinic in ten years and 10 000 operations In about a third of the cases the embolism was not diagnosed, an attempt to operate was made in only 2 of the cases and it failed in both In 4 cases operative intervention might have proved successful as there was an interval of from two to seven days before the fatal outcome But in one the warning symptoms were mistaken for pneumonia and in another the symptoms resembled attacks of weakness to which the patient had been subject and he protested against calling the physician In the 2 others the embolism was recognized but as in 2 similar cases the patients had spontaneously recovered, this was anticipated in these cases and nothing was done This disinclination to active intervention was fostered by the fear of a mistake in the diagnosis Erroneous assumption of embolism had been made in 35 per cent of the cases in the course of the ten years Another reason for reframing is that at the second attack the emboli are usually multiple and scattered

He warns that when the pulmonary artery has been incised in search for the embolus the first thing is to relieve the right heart leaving the extraction of the embolus till later He regards as the cause of the fatality in one operative case the neglect to wait for the right heart to obtain relief by pumping out some of the blood through the incision in the artery It might be useful to have the assistant take the heart in his palm and compress with his fingers the region of the mouth of the cava, squeezing the blood out from the heart into the cava, which can stand the dilatation better This manipulation should precede the incision of the pulmonary, and be continued during the entire period of extraction of the embolus This procedure is of great aid in suturing the heart

Conditions in the inferior vena cava at a laparotomy often invite thrombosis and embolism from this is favored by resumption of the normal type of breathing, the ample excursions of the diaphragm after the shallow breathing imposed by the pain in the laparotomy wound This throws light on the date when embolism usually appears Another point which he emphasizes is the possibility that a small thrombus inside the heart may grow to a fatal embolus This would explain the cases in which central ligation of the thrombosed vessel did not prevent embolism, and it is a further argument for the necessity of letting the right heart pump out its contents for a few systoles

Intestinal Polyposis—Muller emphasizes the danger from hemorrhages and diarrhea with this disease, torsion of the polypous growths entailing hemorrhages, and he cites Doering's statement that of the fifty known cases of intestinal polyposis thirty-one terminated in cancerous degeneration The roentgenogram is from his case in a boy of 16, the symptoms first noted a year before The sister, two years old presents a similar clinical picture The boy is of the adipose genital dystrophy type An attempt with radium treatment has been reported from France, with arrest of the diarrhea and considerable retrogression of the polyps Roentgen ray treatment was proposed to Muller's patient, but it was rejected

Intestinal polyposis

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Induced Blanching of Eruption in Diagnosis of Scarlet Fever—In dealing with doubtful cases of scarlet fever the prompt recognition of which in a large hospital is imperative, Neumann has come to appreciate highly Schulz and Charlton's *Ausloschungsphanomen* which he has been using for the past year Schulz and Charlton found that injections of convalescents serum dispelled the eruption of scarlet fever in the neighborhood of the injection site Only the scarlatinal eruption was thus blotted out, other scarlatiniform or confluent eruptions showed no change following intracutaneous injections of 1 or 0 5 c c of serum Serum from patients at

the height of the disease does not produce this discutient phenomenon, but all other serums, not only convalescents serum but also normal serum and serums from cases of other diseases blotted out the eruption of scarlet fever in the region of the injection Armed with these two positive facts, first that only the eruption of scarlet fever is locally dispelled, and, second, that early scarlet fever serum is the only serum that does not produce the phenomenon, valuable aid for the differential diagnosis of scarlet fever seemed to be established, and such has proved to be the case The local blanching of the eruption appears from six to eight hours following the injection and persists The diagnostic results border on certainty No harm resulted in his 200 injections

Dermatomyositis and Infectious Diseases of Muscles—Von Niedner regards dermatomyositis as a distinct disease entity from the clinical, etiologic and pathologic standpoints and hopes by this account of two fatal cases to awaken the interest of the general practitioner in the rather confusing array of infectious diseases of the muscles All attempts to influence the course of the disease proved futile By bed rest, Karell diet and the use of calomel it was possible to reduce the edema and thus to bring about a temporary improvement in the appetite and the general condition, but no marked influence on the course of the disease was attained The very painful deglutition symptoms were partially relieved by steam from water to which epinephrin had been added so that the patients were able to take sufficient nourishment up to the last The attempt to improve the glycogen content of the muscles by increasing the sugar intake and thus procuring an increased immunity was unsuccessful

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*Renal Glycosuria A Galambos—p 600
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*Treatment of Dupuytren's Contracture F Momburg—p 602
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*Abdominal Actinomycosis Brandenstein—p 603
Hematuria in Influenza B Goldberg—p 604
The Campaign against Alcohol B Laquer—p 605
Rhinolaryngologic Hints for General Practitioners Finder—p 606

Transitory Glycosuria of the Renal Type—Galambos states that so-called renal diabetes is usually regarded as an extremely rare condition However, he is inclined to think that it is not its occurrence but its recognition that is rare He finds less than twenty-five cases reported in the literature To these he adds two cases, the first was in a young man of 28 who had suffered from stomach trouble since he was 12 At the age of 23 he had been operated on for gastric ulcer At the present admission the sugar content of the urine was 0 2 per cent By reduction polarization and fermentation tests the sugar was shown to be glucose Levulose and pentose reactions were negative The glycosuria did not disappear when carbohydrates were withdrawn When the general carbohydrate intake was increased there was no rise of the urinary sugar content When from 130 to 500 gm of carbohydrate were ingested within twenty-four hours sugar excretion was not influenced thereby The amount of sugar excreted within twenty-four hours varied from 0 to 6 gm the average being 3 gm A period with no glycosuria ran parallel to the largest carbohydrate intake (500 gm) Noorden is cited to the effect that in light and especially in recent cases of diabetes mellitus it may occur that the degree of glycosuria is independent of the carbohydrate intake but in renal diabetes this is the rule In renal diabetes, when the kidneys owing to their sensitiveness to sugar, have excreted sugar in the presence of a subnormal or low blood sugar content which is an indication that the renal sugar threshold is lowered, it is not surprising if the glycosuria is increased to correspond to the moderate increase of blood sugar caused by the ingestion of 100 gm of glucose In other words a patient with renal diabetes may react toward glucose in the same manner as a true diabetic or as any other patient with reduced sugar tolerance In the latter cases the increased glycosuria is directly associated with a markedly increased hyperglycemia while in renal diabetes on account of the low renal sugar threshold a very slight rise of the blood sugar content suffices to produce or increase the glycosuria In diabetes mellitus the blood sugar content and the glycosuria are increased not only by the sugar content of the diet but also by the starch and albumin content In renal diabetes only glucose increases the glycosuria and this may be accomplished by a very slight augmentation of the hyperglycemia In Galambos case the glycosuria had subsided and did not return during the last ten days of clinical observation, not even after ingestion of 500 gm of carbohydrate Galambos has been unable to find any analogous cases on record of transient glycosuria of the renal type

Treatment of Dupuytren's Contracture—Momburg finds the radical operation not only laborious but also dangerous on account of the frequent necrosis of the skin flaps He believes that subcutaneous division of all the contracted fascia is the simplest and most effectual method for treating Dupuytren's contracture

Abdominal Actinomycosis—Brandenstein reports a case in a girl of 13 although it rarely occurs in young persons The actinomycosis had evidently developed from a diseased appendix and had given rise to right pyosalpinx Although even approximately radical extirpation of the actinomycotic foci was impossible and although the disease process had extended to the back—both of which circumstances pointed to an unfavorable outcome—yet all the signs of the disease disappeared after the operation and there has been no recurrence during the six months to date

Monatsschrift fur Geb und Gynakologie, Berlin

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*To Promote Rapid Separation of the Placenta G Sklawunos (Athens)—p 291
*Relations Between Left Adnexa and Sigmoid Flexure H Erdmann—p 301
*Injection of Epinephrin into the Heart Elisabet Heydloff—p 318
*Radiotherapy in 1919 H Wintz—p 331 Concn in No 6 p 415

Injection of Fluid to Aid in Separation of Placenta—Sklawunos injects about 150 c c of hot citrated saline through the umbilical vein into the placenta He cuts off the cord about five fingerbreadths from the vulva to allow blood to flow freely and avert thrombosis The fluid is at a temperature of 50 or 60 C (122 or 140 F) and it flows from a height of 1½ or 2 m above the level of the bed In a minute or two after the fluid enters the vein the two umbilical arteries begin to swell as the blood is forced into them by the pressure from the inflowing fluid The arteries are then clamped and spontaneous expulsion of the placenta awaited The uterus was always found intensely contracted and hard, while there was no bleeding Further advantages were the moderate lochia and the attenuation or abolition of afterpains The hot fluid spreads through the villi and thus acts like a spray on the placental area of the myometrium causing it to contract and checking any tendency to bleed It is possible that toxic products from the fetus accumulated back of the placenta may thus be forced into the circulation and further stimulate the uterus to contract

Connection Between Intestines and Adnexa—Erdmann reports thirteen cases in which the left ovary alone was tender and swollen in the total absence of puerperal septic and gonococcus disease In all there was enteritis in the sigmoid region for which the war diet was probably responsible and in every case the ovaritis subsided under treatment of the pathologic conditions in the bowel

Intracardial Injection of Epinephrin—Heydloff reports that the pulse disappeared suddenly as the placenta was being separated by hand during cesarean section done on account of contracted rachitic pelvis Massage from without had no effect on the pulseless heart and 2 c c of a 1 per cent solution of epinephrin (adrenalin) was injected directly into the heart through the fourth left interspace close to the sternum No effect was apparent and the woman seemed dead but then the incision began to bleed and the heart was found beating rapidly artificial respiration had to be kept up for a time The total arrest of the heart action covered five or six minutes The case was complicated by the fact that

owing to some blunder, two injections of scopolamin-morphin had been given, instead of the routine single injection Artificial respiration and insufflation of oxygen had been continued through the entire operation

Radiotherapy in Germany in 1919—In the course of this critical review, Wintz states that Weibel applied radium as a prophylactic measure in 264 cases after operations for uterine cancer, but found that the intestine and the bladder were injured thereby in so many cases that the method has been abandoned Pranter has reported roentgen ulcer developing in the abdominal wall a year and a half after a course of roentgen-ray treatment for uterine myoma The tardy ulceration followed immediately after sunbaths which suggests, Wintz declares, that regions which have been exposed to the roentgen rays should be considered points of lesser resistance, and be protected thereafter against further injury He adds that Holzknecht has treated 150 cases of "roentgen hands," keratosis, ulcerating epitheliomas, with the roentgen rays, and insists that roentgen keratosis is amenable to treatment by the roentgen rays Depenthal has reported from Cologne the case of a roentgen nurse who developed in 1907 a roentgen carcinoma of the right thumb and part of the left hand, and recently, bilateral roentgen mammary cancer compelled amputation of both breasts This is cited as the first instance known of roentgen-ray carcinoma developing in an organ under intact skin In all the previously reported cases of roentgen cancer, it started in the epidermis and was of the basement epithelium type. Wintz mentions further some instances in which the amount of ozone generated in the roentgen room surpassed the tolerated maximum

Wiener klinische Wochenschrift, Vienna

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Degeneration and Its Signs J Bauer—p 141
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Enuresis and Myelodysplasia J Zappert—p 463
*Gastrectomy in Perforating Gastric and Duodenal Ulcer G Schwarzmann—p 469
Mixed Infection in Surgical Tuberculosis M Jerusalem—p 471
*Injections of Alcohol into Gasserian Ganglion H Pichler—p 473
Begun in No 21 p 441

Gastrectomy in Perforating Gastric and Duodenal Ulcer—Schwarzmann states that the radical treatment of gastric ulcer is gaining more and more adherents The less radical methods excision or exclusion of the ulcer, or leaving it untouched are yielding to gastrectomy The ulcer left in the abdominal cavity is often a source of continued pain The dangers of hemorrhage and especially of perforation persist The presence of multiple gastric ulcers and of contact ulcers situated opposite to duodenal ulcers are further evidence of the uncertainty of the excision procedure Exclusion without extensive resection gives uncertain results, to mention only the appearance of peptic ulcers Marked meteorism or a septic condition of the patient may be contraindications to gastrectomy

Injections of Alcohol into the Gasserian Ganglion—Pichler reports that injections of alcohol into the gasserian ganglion can be relied on to cure trigeminal neuralgia in almost every instance However the procedure is by no means simple, but requires much practice It should be used only when all other methods have failed or when the pain is unbearable It usually renders gasserectomy unnecessary Local causes should be searched for and removed A careful examination of the buccal cavity the nose and the eyes is essential in which roentgenography will usually play a part Neuroparalytic keratitis is a common complication Hence the need of a careful examination of both eyes before injections are begun The dose of alcohol required varies greatly Not infrequently ten times or even fifteen times as much may be necessary as Hartel assigns as the maximal dose (1 c c) Peripheral injections and injections at the base of the skull are useless if several branches of the nerve are involved Resection of the second and third branch (Kronlein) is contraindicated because it makes future injections of alcohol more difficult

Zeitschrift fur Tuberkulose, Leipzig

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Zentralblatt fur Gynakologie, Leipzig

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Atresia of Cervix Uteri and Pregnancy H Lau—p 568
*The War and Puerperal Eclampsia W Gessner—p 570
A Case of Syncytioma Malignum F Stork—p 572

War and Puerperal Eclampsia—From the fact that puerperal eclampsia during the four years of the war was progressively reduced under the restricted diet, Gessner concludes that the manifestations are due to a disease process which is amenable to control and which may be easily influenced by dietetic measures

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

May 1 1920 **1**, No 18

*Rupture of the Membranes at Delivery C Koek—p 1527 Reply by I A Wijsenbeek in No 20 p 1712
Improved Blood Pressure Recording Apparatus Dirken—p 1539
Needle in Pharynx Wall D J De Levie—p 1543

Induced Rupture of Fetal Membranes—Koek defends the practice of puncturing the bag of waters early to promote delivery, and cites figures from the Leyden Maternity which show that the proportion of instrumental deliveries has been reduced to a tenth of what it was before this became the systematic practice Among the 1,822 deliveries, there were only eighteen deaths among the children for which some other cause was not palpably evident

Hospitalstidende, Copenhagen

May 19, 1920 **63**, No 20

*Effect on the Blood of Restriction of Fluids V Rubow—p 305

Action on the Blood of Restriction of Intake of Fluid—Rubow ascribes part of the benefit from sweating, augmented diuresis and purges, Karell and similar "cures"—the essential feature of which is a dry diet—to the resulting concentration of the blood Singer's treatment of chronic bronchitis by reducing the intake of fluids is another instance of the advantage that may result with localized infections from reducing the water content of the organism With the Karell cure only 800 gm of milk is allowed, this covers only about a third of the requirement for fluid for the twenty-four hours Rubow found in some cases of ascites given this treatment that the water content of the blood was reduced by 8 10 or even 12 5 per cent in the course of a few days He comments on the neglect of Finsen's recommendation of a dry diet in treatment of ascites, the literature of the last twenty years showing innumerable cases in which cardiac dropsy has been treated with digitalis, strophanthus and strong diuretics, when simple restriction of fluids and less salt in the food might have answered the same purpose in banishing the dropsy Rubow tabulates the findings during the week of the Karell cure in four cases, showing how the ash of the blood increased from 19 2 to 21 95 in one case In a case of nephritic dropsy, the sodium chlorid content of the blood ran up rapidly from 0 529 to 0 665 per cent The diuresis accompanying this he explains as a salt diuresis, like that which can be induced experimentally by rendering the blood transiently hydremic and oversalty by injecting a hypertonic solution of sodium chlorid In one case of ascites, there was no increase in the sodium chlorid content of the blood, and the diuresis did not increase either under the Karell treatment The sodium chlorid absorbed from the hydrops was eliminated exclusively in the urine one day it amounted to 1 54 per cent of the urine The hydrops fluid was eliminated by lungs and skin

Hygiea, Stockholm

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STUDIES IN BASAL METABOLISM*

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MINNEAPOLIS

Metabolism is the basis of life and of all its phenomena Like Tennyson's "Brook," it goes on forever Species are cast in various molds, generations appear and disappear, youth is followed by maturity and age, yet through it all, running along on predetermined lines, goes metabolism

Protoplasm is not mere matter The cell is the origin of energy, the seat of chemical exchange, of growth, of function and of life The digestion and assimilation of nutriment, reproduction, growth, inflammation, degeneration, regeneration, exercise of function, motion and emotion are all matters of chemistry Species, genus and period of existence are incidents determined by heredity, while size, weight and even personal appearance are matters of metabolism Where life is, metabolism is, and regulating it are the endocrine glands, the glands of internal secretion

By the aid of calorimetry we learn that in health the regulating factors are adjusted or balanced to yield metabolic rates best adapted to energy requirements and to bodily needs Thus, during rest and sleep the energy requirement and output are low and the rate is decreased, but as more energy is demanded, the rate of metabolism increases in proportion to the need The two extraneous factors most commonly and markedly affecting metabolic rates are exercise and food It is necessary, therefore, to adopt for comparative purposes conditions under which these factors are reduced to a minimum The resulting rate, designated the "basal metabolic rate," represents metabolism when the body is at complete rest and when the digestive processes are at their normal daily minimum So perfect is the adjustment in health that under the conditions indicated the basal metabolic rate is found to bear a constant relation to the surface area, the rate thereby becoming mathematically a function of the body surface, while in many diseases metabolism is fundamentally deranged, the basal metabolic rate ranging far above or below normal In the following paragraphs, discussion will center on some of the more important factors affecting the basal metabolic rate

TECHNIC EMPLOYED IN DETERMINING THE BASAL METABOLIC RATE

The development of indirect calorimetry is significantly affecting medical practice The determination of the basal metabolic rate is at present a practical procedure which can be carried out in any well equipped hospital or clinic, at the bedside or in the laboratory The newer methods enable the physician to gather fundamental information concerning the status of the patient's metabolism formerly available only through elaborate studies carried out in special institutions equipped with costly calorimeters and manned by a highly trained personnel

In determining the basal metabolic rate, the gasometer method is employed In our work Tissot's[1] spirometer, with certain modifications introduced by Boothby[2] and Sandiford,[3] has been employed in the collection of air, and in its analysis Haldane's apparatus

Preparation of the Patient—The rate is determined after a fourteen hours' fast, that is, in the morning before breakfast, no food having been taken since the meal of the previous evening Hospital patients are confined to bed and brought to the laboratory on a litter, and after a fifteen to thirty minutes' wait, collection of air is begun Patients from outside, brought in automobiles or street cars, are subjected by routine to from one-half to one hour's rest, preferably lying down, before the collection of air is instituted The patients are instructed to breathe as naturally as possible and to avoid forced expiration in an effort to overcome the slight resistance of the apparatus Patients who are uncomfortable tend to deep and irregular breathing Obese persons and those with marked thyroid enlargement are accorded special attention as to posture, the head being elevated and the patient placed in as comfortable a position as possible Control collections are necessary when uncertainty exists as to the comfort of the patient during the period of collection In nervous and neurasthenic persons, repetition on a subsequent day is also necessary, since not infrequently high rates are encountered in the initial readings

BASAL METABOLIC RATE IN NORMAL PERSONS

Any method to be of value must yield under proper control consistent normal values in normal persons, and

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* From the Department of Medicine University of Minnesota Medical School

* Because of lack of space this article is abbreviated in THE JOURNAL The complete article appears in the Transactions of the Section and in the author's reprints

* Read before the Section on Pharmacology and Therapeutics at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Tissot J Nouvelle methode de mesure et d'inscription du debit et des mouvements respiratoires de l'homme et des animaux J de phys et de path gen 6 688 1904

2 In Boothby's modification of Tissot's technic a face mask replaces the nasal tubes Douglas mica valves replace the electrically controlled valves used by Tissot and a steel tape replaces the automatic measuring device of the original apparatus

3 Boothby W M The Clinical Value of Studies of Thyroid Cases Boston M & S J 1919 Boothby W M and Sandiford I Basal Rate Determination Philadelphia W

deviations from normal only when variations actually exist' The basal metabolic rate itself is subject to many and varied influences, while the technic and calculations involved contribute additional possible sources of error From an experience extending over fourteen months and involving approximately 750 determinations on 350 persons, we believe that the method yields results which vary only within narrow limits, which are reliable and consistent, and which are of practical value in following the clinical course of the case

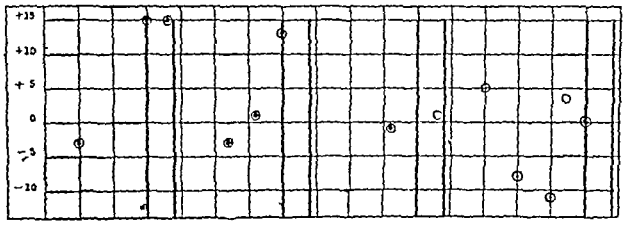

Fig 1—Basal metabolic rates in relation to menstruation The columns represent the menstrual periods

As controls, a group was studied consisting of twenty-eight healthy students and nurses, and persons suffering from minor ailments entirely unassociated with endocrine disturbances (Table 1)

In order further to control the accuracy of the method and the constancy of the basal metabolic rate, a group of normal persons was subjected to repeated observations In twenty-five determinations on nine subjects, the greatest variation found in the rate in an individual case was 10 5 per cent, the average variation being approximately 5 per cent (Table 2)

TABLE 1—BASAL METABOLIC RATE IN NORMAL PERSONS

A			B		
Normal Persons			Patients with Minor Ailments Unassociated with Endocrine Disturbances		
Name	Sex*	Basal metabolic Rate	Name	Sex	Basal metabolic Rate
M B	♀	—6	L B	♀	+8
G H B	♂	—6	S C	♀	+6
D D	♀	+7 8	M G	♀	+6
C W	♂	—7	M G 2	♀	+5
L Z	♂	—1	J	♂	+5
M M	♀	+3 1	M T	♀	—2
J M	♀	+4	R.	♀	+6
W J B	♂	+1	A P	♀	+4
R K	♀	+2 5	M A	♀	+7
L M	♀	+1 4	L K	♂	+2
R C	♀	+2 5	B	♀	0
E B	♀	—2 4	F S	♂	+1
R B	♀	+3 4	L B	♀	—4
F K	♀	—1 8	E L	♀	—4

* In this column ♂ indicates male and ♀ female

TABLE 2—REPEATED DETERMINATIONS ON NORMAL PERSONS

No	Name	Sex	Between the Dates	Metabolic Rates	Greatest Variation Between Readings
1	W J B	♂	1/ 3 1/22	+1 —1 2 +1 3	2 8
2	R. K	♀	11/27 1/10	+2 5 +2 9 +3 2	0 7
3	L M	♀	11/15 11/26	+1 4 +0 5 —2 2	3 6
4	R. C	♀	12/10 2/ 3	+2 5 +5 +2 3	2 7
5	F B	♀	12/11 3/18	—1 4 —3 4 —0 5	2 9
6	O G	♀	3/ 2 3/11	+2 +1 7	0 3
7	D D	♀	11/21 3/11	+7 8 —1 +9 5	10 5
8	McL	♀	10/ 4 1/16	+3 1 —2 7	5.8
9	H. D	♀	10/11 1/20	—2.9 —7 7 +1.5	9.2

Effect of Previous Exercise—As a matter of practical importance, it is necessary to ascertain whether or not moderate exercise in the morning just prior to determination affects the rate, since many patients are sent in from the outside for determination of the basal metabolic rate Reliable results can be obtained on outpatients after moderate exercise, provided they are subjected to from one-half to one hour's rest, but without this rest the results are unreliable In order to ascertain the extent to which exercise affects basal metabolism, the rate of several subjects was determined immediately subsequent to moderate exercise, that is, a short walk of 300 yards and the climbing of two flights of stairs, the amount of exercise to which many patients are frequently subjected The changes encountered emphasize the need of careful control in this connection (Table 3)

The Effect of Menstruation—Menstruation, a factor usually neglected, is perhaps of some practical importance *So far as we are aware, it has never been* allotted any consideration in the studies of metabolism But it does affect the basal metabolic rate of women at times in health and in disease To determine the extent of its influence a special investigation has been carried out by one of us (Ford), the details of which will appear shortly in a separate communication. The effect of menstruation can be seen in the chart which represents the findings in a normal student (Fig 1)

A rather constant rise occurs during menstruation or in the premenstrual period, the rise being followed by a postmenstrual fall Ten cases have been studied

TABLE 3—EFFECTS OF EXERCISE ON BASAL METABOLIC RATE

Name	Sex	Previous to Exercise	After Exercise (Immediately)
H B	♀	+5	+63
D D	♀	—8	+43
H P	♀	+1 8	+88
		+1 5	+67
M McL	♀	—2	+32

Of these, two show practically constant rises, and six constant rises, varying from 4 per cent to 14 per cent, the average being 10 per cent, while in two a drop in rate was encountered Values outside normal limits, ± 10, are infrequent

BASAL METABOLISM IN DISEASE

In this connection detailed consideration will be allotted basal metabolism in certain diseases of the endocrine system In our studies hyperthyroidism, febrile diseases and leukemia have exhibited the highest rates, while hypothyroidism, polyglandular deficiencies and afebrile conditions resulting from inanition and marked asthenia have yielded the lowest rates Starvation and prolonged rest in bed tend to result in low rates

DISEASES OF THE THYROID

The thyroid is the principal or chief "regulator of metabolism" Whereas other endocrine glands may be concerned with specific features of metabolism, such as growth, carbohydrate metabolism or water balance, the thyroid affects primarily the metabolic rate, and secondarily perhaps other features

Friedrich Muller [6] and Magnus-Levy [7] were the first to direct our attention to the metabolic changes attending diseases of the thyroid

6 Muller Friedrich Beitrage zur Kenntnis der Basedow schen Krankheit, Deutsch Arch f klin Med 51 335-412 1892 1893

7 Magnus Levy A Ueber den respiratorischen Gaswechsel unter dem Einfluss der Thyreoidea sowie unter verschiedenen pathologischen Zustanden Berl klin Wchnschr 32 650-652 1895 The Physiology of Metabolism in von Noorden K H Metabolism and Practical Medicine Chicago Keener & Co 1, 1907

In the study of various diseases of the thyroid we have found Plummer's [8] classification of the greatest assistance These groups have been recognized

1 Hypothyroidism, (*a*) cretinism, (*b*) myxedema
2 Hyperthyroidism, (*a*) exophthalmic goiter, (*b*) thyrotoxic adenoma
3 Nontoxic enlargements of the thyroid, (*a*) adenoma, nontoxic, (*b*) adolescent goiter, (*c*) colloid goiter

HYPOTHYROIDISM

A group comprising thirteen cases of cretinism and myxedema was investigated from the standpoint of basal metabolism An unusual opportunity for the study of cretinism [9] and juvenile myxedema was afforded through the presence of eight such patients in the State Institution for Feeble-Minded [10] Through the courtesy of the superintendent, these patients were brought to the University Hospital, where they were subjected to an intensive study which included routine physical examination, Wassermann tests, urinalyses, studies of blood chemistry and of basal metabolic rates, roentgenograms, electrocardiograms, anthropological measurements, dental examinations, and physiologic investigations involving determinations of the auditory reaction time and Binet and performance tests The patients' ages varied from 15 to 31 years In all but two cases the objective and subjective manifestations were characteristic (Fig 2 and Table 4) The thyroid could not be palpated in six, while in two (F D and N D, sisters) cystlike tumors about 2 by 3 cm and of fibrous consistency were felt in the region of the isthmus Of the two remaining cretins, one (W R, Fig 3) was typical in every respect, while the other, though mild and atypical clinically, represented the lowest metabolic rate encoutered in the entire series

In the cretins, the metabolic rate varied from —7 to —25 No constant or absolute parallelism between the clinical manifestation and the metabolic rate [11] could be established, although, generally speaking, some agreement existed The striking exception is seen in Case 9, which represents the lowest rate, although the clinical manifestations were mild Whether or not environment plays a role clinically must be considered, since the patient, the child of wealthy parents, had been surrounded since birth with all the comforts and luxuries of life (Table 4)

HYPERTHYROIDISM

Under hyperthyroidism are included exophthalmic goiter and adenoma of the thyroid with hyperthyroidism (thyrotoxic adenoma)

Exophthalmic Goiter (Parry's, Graves', or Basedow's disease) —Although the first description of this disease appeared in 1827, it was not until 1895 that Magnus-Levy called attention to the increased metabolic rate In this country special attention has been given the subject by Means and Aub,[12] Du Bois,[13] Plummer,[8] Boothby and Sandiford,[3] and McCaskey [14]

In our small series comprising thirteen cases, which were all typical clinically, the basal metabolic rate ranged from + 20 to + 82, the rates being approximately proportionate to the clinical evidences of thyroid intoxication Two patients of the series died The patient with the highest rate, + 82, died within a month after single ligation The second patient, rate + 56, did not come to operation, but died of cerebral apoplexy The rates relative to our cases can be seen in Table 5, and the results of treatment in Table 6

Fig 2—Cretinism and juvenile myxedema From left to right back row A H aged 24 I A aged 15 front row C F aged 22 F D aged 15 N D aged 25, W A aged 31

One case was of particular interest, especially in relation to the recent publication of Means and Aub, in which they advocate the use of the roentgen ray in the treatment of exophthalmic goiter The patient, aged 28, presented a small adenoma in association with a diffuse parenchymatous hypertrophy More than a year subsequent to lobectomy, the basal metabolic rate was still abnormally high and did not respond to six weeks' rest in bed and courses of sodium cacodylate A rapid return of the rate to normal, together with marked clinical improvement, followed repeated roent-

8 Plummer H S The Clinical and Pathologic Relationships of Hyperplastic and Nonhyperplastic Goiter J A M A **61** 650 651 (Aug 30) 1913 The Clinical and Pathologic Relationship of Simple and Exophthalmic Goiter Am J M Sc **146** 790 796 1913 The Function of the Thyroid Normal and Abnormal Tr Assn Am Phys **31** 128 133 1916

9 We are indebted to Dr E C Kendall for the thyroxin used in these studies

10 The details of these investigations will be the subject of a separate report The question might be raised as to whether or not we are correct in accepting the chronological age as the basis of calculation in determining the basal metabolic rate in cretins of advanced age Thus in W A Case 7 the rate is —7 Were we to accept the mental or physical development (2 to 5 years) as the basis of calculation the rate would be lower and more in keeping with the clinical findings

11 An attempt to correlate basal metabolism and mentality utilizing for this purpose standard psychologic measurements would probably reveal most interesting relationships

12 Means J H and Aub J C A Study of Exophthalmic Goiter from the Point of View of the Basal Metabolism with Remarks Concerning the Effect of Various Forms of Treatment J A M A **69** 33 37 (July 7) 1917 The Basal Metabolism in Exophthalmic Goiter Arch Int Med **24** 645 677 (Dec) 1919 Means J H Aub J C and Du Bois E F Clinical Calorimetry Twentieth Paper The Effect of Caffein on the Heat Production Arch Int Med **19** 832 849 (May) 1917

13 Du Bois E F Clinical Calorimetry Fourteenth Paper Metabolism in Exophthalmic Goiter Arch Int Med **17** 915 964 (June) 1916

14 McCaskey G W The Basal Met[illegible] ar [illegible]erglycemic Tests of Hyperthyroidism with Special Ref[illegible] Latent Cases J A M A **73** 245 247 (July [illegible]) 1919 Examinations in General Internal [illegible]ion Illustrative Cases ibid **74** 927 9[illegible]

gen-ray treatments[15] (Fig 4) This case is not presented as an argument for roentgen-ray as against surgical treatment, but it does indicate the desirability of utilizing the roentgen ray when surgical treatment has failed or fallen short of complete restoration to normal

Adenoma of the Thyroid with Hyperthyroidism (thyrotoxic adenoma).—In analyzing our hyperthyroid material we have followed Plummer, who has clearly separated from true exophthalmic goiter accompanied by hyperplasia and hypertrophy of the thyroid a group of cases of adenoma with thyrotoxicosis

Plummer's contention as to the thyrotoxic character of the symptoms encountered in this disease, namely, nervousness, tremor, tachycardia and loss of weight and strength, finds confirmation in the increased metabolic rates encountered in the investigations carried on in the Mayo Clinic by Plummer,[8] Boothby[3] and Sandiford,[16] and in the results of our studies here reported[17]

In our series are eleven cases of thyrotoxic adenoma, three of which exhibited slight but definite exophthalmos The data in relation to our series appear in Table 7, and the results of treatment in Table 8

TABLE 4.—CRETINISM AND JUVENILE MYXEDEMA

No	Patient		Age	Sex	Height Cm	Weight Kg	Mental Age, Mo *	Reaction Time Seconds	Basal metabolic Rate	Grade†	Treatment	Result
1	H L	18410	31	♀	119 3	37	22	Patient too stupid	—20	4	Thyroxin	Markedly improved
2	I A	18408	15	♀	136	63	44	0 399	—23	3	Thyroxin	
3	C F	18414	22	♀	130	39	54		—14	3	Thyroxin	
4	F D	18411	15	♀	99	28 8	32	0 199	—13	2	Thyroxin	
5	N D	18413	25	♀	125	41 5	3?	0 067	—22	4	Thyroxin	
6	A H	18412	24	♀	144	5 2	48	0 289	—12	3	Thyroxin	
7	W A	18409	31	♂	115	2? 8	55	0 ?25	— 7	4	Thyroxin	
8	W R		7	♂	90	45	66		—21	2	Thyroxin	Markedly improved
9	K Mc P C		6	♀	112	18 2	46		—2?	1-2	Thyroxin	Markedly improved
10	M B	18632	27	♀	13?	50	42		—12	2	Thyroxin	
						ADULT MYXEDEMA						
	M P	16424 14?99	52	♀	137 5	60 1	Mentally fair	Mental reaction slow	—32	2 3	Thyroxin	Myxedema disappeared
	P		50	♀	164	70 4	Childish mentally		—21 5	1	Thyroxin	
	P	18609	37	♂	16?	70	12½ years		—26	2	Thyroxin	Improved

* Tests made in the department of psychology
† On a basis of 1 to 4

TABLE 5.—CONDITIONS IN EXOPHTHALMIC GOITER BEFORE TREATMENT

No	Patient		Age	Sex	Thyroid	Pulse	Blood Pressure Systolic	Blood Pressure Diastolic	Left Ventricular Hypertrophy	Tremor	Eye Signs	Loss of Weight	Nervousness	Grade	Basal Metabolic Rate
1	R W	18083	21	♀	Large diffuse vascular	90	124	76	+	+	+	0		2	+30
2	G W	16086	1?	♀	Large diffuse vascular	100-150	160	65	Dilatation +	++	+	+	++	4	+56
3	V A	16899 15542	23	♀	Large diffuse, vascular	12?	122	56		+	+	10 pounds	+	2	+45
4	M T	17?63	5?	♀	Large diffuse vascular	100	158	80	+	+	+	Very slight	+	3	+52
5	P O	17296	30	♀	Large diffuse vascular	170	174	66	+	Slight	Slight	Slight	+	2	+74
6	C Z	17455	47	♀	Large diffuse vascular	90	150	65		+	Slight		+	2	+55
7	A E	17069	26	♀	Large diffuse vascular	120	116	48	+	+	+	Very slight	++	4	+82
8	E P	9?63 18062	28	♀	Small adenomatous	100	140	80	+	+	Slight	+	+	3	+50
9	E J O	1?002 17270	2?	♀	Large diffuse vascular	100 110	112	72	Slight	Slight	Slight	++	+	3	+65
10	M A	P C	3?	♀	Large diffuse vascular	110			+	++	+	Slight	+	3	+45
11	M Mc	P C	?7	♂	Large diffuse vascular	8?-100	18?	10	+	Slight	++	Slight	+	3	+54
12	E P V	18763	31	♀	Moderately enlarged vascular	110	140	60		+	+	+	++	3	+53
13	A L	18?02	1?	♂	Large diffuse vascular	110	142	64	Dilatation +	+	++	+	+	2	+19

According to Plummer, in thyrotoxic adenoma the enlargement of the thyroid appears earlier in life, the struma persists, as a rule, for a much longer period before the appearance of thyrotoxic manifestations, exophthalmos develops much less frequently and is less marked, and hypertension is of common occurrence Some cases of this group closely resemble exophthalmic goiter, while in others the cardiovascular phenomena predominate, hypertension playing a great role early in the course of the disease, and myocardial degeneration in its later stages

NONTOXIC ENLARGEMENTS OF THE THYROID

Nontoxic Adenoma.—Adenoma may persist for many years without concomitant toxic manifestations Plummer states that adenomas appear as a rule about the twenty-second year, but that the toxic manifestations do not usually appear until the thirty-sixth year Certainly adenomas may exist for many years with the

15 Our data are too meager to permit an expression of opinion concerning the relative merits of the surgical and the roentgen ray treatment The subject is being investigated in our clinic

16 Sandiford Irene The Basal Metabolic Rate in Exophthalmic Goiter (1917 Cases) with a Brief Description of the Technic Used at the Mayo Clinic Endocrinology 4 71 87 1920 The Effect of the Subcutaneous Injection of Adrenalin Chlorid on the Heat Production Blood Pressure and Pulse Rate in Man Am J Physiol 51 407-422 1920

17 We wish to express our gratitude to Drs Plummer and Boothby and to Miss Sandiford for assistance in the installation of our metabolic laboratory and for many helpful suggestions in regard to technic

entire absence of general symptoms Our study included a series of twenty-two cases, practically all the rates fell within normal limits

Adolescent Goiter —Fourteen girls (a group of university students) presenting adolescent goiter were studied for the basal metabolic rate With two exceptions the rates fell within normal limits In neither of the cases with high rates were there either symptoms or signs of thyroid intoxication

BASAL METABOLISM IN DISEASES OF THE PITUITARY GLAND

The pituitary gland is concerned primarily with phenomena of growth and sex development, and perhaps also with water balance The relation of the pituitary to the basal metabolic rate and to the function of the thyroid in health and disease has not yet been fully determined

Hyperactivity of the anterior lobe occurring in youth results in gigantism, and in adults in acromegaly, while hypo-activity results in infantilism, and when combined with deficiency of anterior lobe hormone, in Frohlich's syndrome or dystrophia adiposogenitalis Hypo-activity of the posterior lobe and pars intermedia gives rise to diabetes insipidus

A group of seven pituitary cases has been studied, including two cases of Frohlich's syndrome and five of primary diabetes insipidus The basal metabolism in these cases and the effect on it of pituitary extract is shown in Table 9

Other instances of pituitary disorders (Frohlich's syndrome and acromegaly) have been encountered showing marked disturbances of the metabolic rate These will be reported later

From the data here represented it is evident that no profound or lasting effect on basal metabolism has resulted from the administration of desiccated powder of the anterior lobe by mouth, or from the subcutaneous use of the extract of the posterior lobe and pars intermedia The addition of thyroxin to anterior lobe extract resulted in two cases of Frohlich's disease in a marked increase in metabolic rate which was somewhat in excess of that induced by similar doses in normal persons

BASAL METABOLISM IN DIABETES MELLITUS [18]

The fall of metabolic rate accompanying the period of fasting in the treatment of diabetes mellitus is striking As a rule, during starvation bradycardia develops, and concomitantly a fall in metabolism, decreases of from 10 to 20 per cent being commonly encountered The variations in rate in a series of patients on an ordinary diet, during the period of fasting, and subsequently on the highest caloric or maintenance diet, are shown in Table 10

THE INFLUENCE OF DRUGS ON BASAL METABOLISM

Little is known concerning the influence of drugs on metabolism Organotherapy is the only field of treatment in which any attempt at systematic investigation has been undertaken as yet

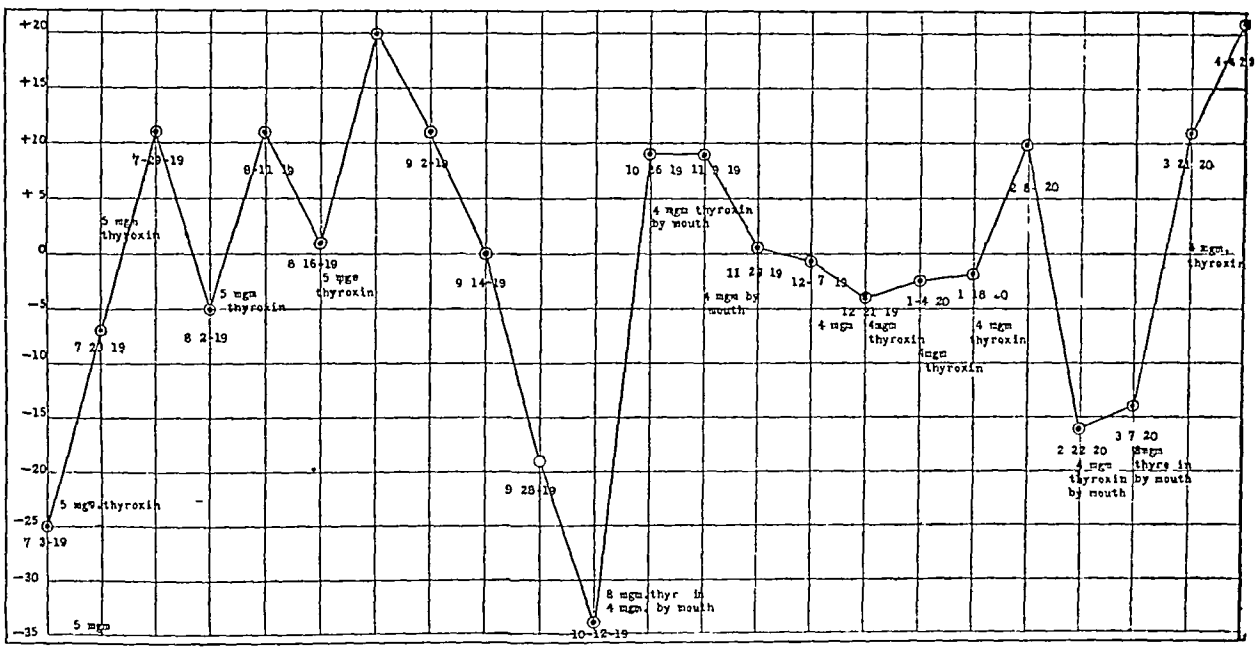

Fig 3 —Effect of thyroxin in cretinism

The effect of subcutaneous injections of epinephrin chlorid has been studied by Sandiford She has demonstrated "an increase of the rate in cellular combustion varying between a calorific increase of from 4 to 48 per cent This increase is usually accompanied by an increase in the ventilation rate, respiration rate, number of heart beats each minute, volume of each beat, greater utilizing of blood-carrying power, and peripheral dilatation with an increased systolic and decreased diastolic blood pressure No relation was found between the intensity of the epinephrin reaction and the degree of hyperthyroidism and hypothyroidism" The increased rates encountered she believes to be in harmony with Cannon's "emergency theory," and with Lusk's findings of an increased metabolic rate in carbohydrate plethora

18 For detailed studies of basal metabolism in diabetes mellitus the reader is referred to Allen F M, and Du Bois F F Clinical Calorimetry Seventeenth Paper Metabolism and Treatment in Diabetes Arch Int Med 1910 1059 (June) 1916 Benedict F G and Joslin E P Metabolism in Diabetes Mellitus Pub 136 Carnegie Inst of Washington 1910 Pub 176 A Study of Metabolism in Severe Diabetes 1912

In relation to the influence of other drugs on basal metabolism no information is available except for caffein, atropin, strychnin, morphin and camphor (Edsall and Means,[19] Higgins and Means,[20] Means and Aub,[12] and Du Bois[13]) Means and Aub demonstrated an increase in basal metabolism of from 7 to 23 per cent, resulting from 10 grains of caffein In therapeutic doses, atropin and camphor have been shown to increase metabolism slightly, morphin to depress it somewhat, while strychnin exerts no appreciable effect

quently pointed out by Kocher of administering potassium iodid to a patient suffering from adenoma of the thyroid

Sodium Cacodylate —In a small series of cases with high rates, sodium cacodylate was administered subcutaneously in courses of 50 mg daily for six days The result was disappointing In one of the milder cases of exophthalmic goiter with a rate of + 31, rest and sodium cacodylate reduced the rate to normal, but in several instances the rate persisted at the same

TABLE 6—RESULT OF TREATMENT ON BASAL METABOLIC RATE IN EXOPHTHALMIC GOITER

No	Patient	Initial Rate Date	Medical Treatment	Rate Following Medical Treatment Date	Surgical Treatment Date	Rate Following Surgical Treatment Date	Comment
1	M A P C	+45 1/20/19	Cacodylate four weeks in bed	+44 2/18/20	Lobectomy 2/20/20	+2 3 4/30 20	Marked improvement
2	E P 18062	+25 12/13/19	Roentgen ray	+ 7 4/10/20		+43 10 31/19	Lobectomy 14 months previously (Fig 4)
3	A E 17069	+82 8/9/19	Sodium cacodylate restricted diet two weeks in bed	+64 8/24/19	Ligation 8/30/19	+33 9/17/19	Severe case patient died
4	C Z, 17455	+55 5/1/19 100*	Rest in bed	+12 10/11/19 78	Lobectomy 10/12/19	+28 11/4/19 80 2/24/20	Clinically improved 4/17/20 rate +26 roentgen ray treatments begun
5	P O 17296	+74 9/10/19	One week in bed	+45 9/20/19	Ligation 10/1/19	+24 1/ 9/20	Clinically improved
6	M T 17563	+38 10/25/19	Three weeks in bed sodium cacodylate	+64 11/15/19	Lobectomy 4/7/20	+28 8	Clinically improved
7	V A 15852 15899	+45 3/19/19	Rest in bed		Ligation 7/1/19	+45	Lobectomy later +41 5 4/23/20 +42 3 5/5/20
8	R W 18083	+32 1/9/20	Four weeks in bed sodium cacodylate	+ 2			Rate rose to +11 just prior to patient s leaving hospital patient now up and about
9	A L, 18702	+19 4/3/20 100	Sodium cyanid daily for six days	+32 4/14/20 110 +33 4/18/20 110	Roentgen ray	+20 5 5/10 20 100 +23 5/14/20 95	Clinically no change
10	V Y 18763†	+53 4/1/20	Sodium cyanid daily for five days	+33 4/17/20	Lobectomy ligation of remaining tissue	+9 6 5/12/20	Improved after surgery

* Pulse. † Transferred to surgical department

TABLE 7—CONDITIONS IN TOXIC ADENOMA BEFORE TREATMENT

No	Patient	Age	Sex	Thyroid	Pulse	Blood Pressure Systolic	Blood Pressure Diastolic	Tremor	Eye Signs	Loss of Weight	Nervous	Cardiac Hypertrophy	Grade	Metabolic Rate
1	K L 18313	18	♀	Large adenomatous masses vascular	90	100	70	+	0	10 pounds	0	+	2	Before KI —2 After KI +53
2	C G 18251	40	♀	Large adenomatous some colloid vascular	70			None	0	0	Slightly	0	1	+31
3	C M O P	25	♂	Small adenomatous	90			Slight	0	+	+	+	2	+25
4	D T 18301	23	♀	Small adenomatous vascular	90 100	130	80	Slight	0	+	++	+	3	+15
5	F P 16862	38	♀	Large adenomatous nonvascular	85	130	70	++	0	+	0	+	3	+28
6	M A F 17007	59	♀	Adenoma of isthmus lobes hypertrophied nonvascular	80-90	154	75	+	++	As much as 50 pounds	+	+	2	+13
7	R V A H B	18	♀	Small granular adenoma of isthmus	80 100	110	65	+	0	++	+	+	1	+10
8	H O 18730	38	♀	Adenoma of isthmus and rt and lt lobes	100	100	75	+	Slight exophthalmos	+	+	0	1	+20
9	H S 16951	21	♂	Diffuse enlarged	80 90			Slight	Slight exophthalmos	++	0	+	1	+16
10	M E 18500	57	♂	Adenoma of left lower pole nonvascular	80-90	110	70	+	Von Graefe no exophthalmos		+	+	2	+45
11	B W 18629	31	♀	Large adenoma rt lobe small adenoma lt lobe	90	122	68	None	Von Graefe Mobius exophthalmos	0	+	Slight	2	+15

Potassium Iodid —The effect of moderate doses of potassium iodid was investigated in seven subjects In four cases with normal thyroids no increase in metabolism resulted, although in two of these the drug was pushed to the point of iodism (rash and coryza) Three subjects presented small adenomas, and in each, marked increase in basal metabolism resulted, 20 per cent or more A most striking result is shown in Figure 5, and serves to emphasize the danger so frequently pointed out by Kocher of administering potassium iodid to a patient suffering from adenoma of the thyroid

Sodium Cacodylate —In a small series of cases with high rates, sodium cacodylate was administered subcutaneously in courses of 50 mg daily for six days The result was disappointing In one of the milder cases of exophthalmic goiter with a rate of + 31, rest and sodium cacodylate reduced the rate to normal, but in several instances the rate persisted at the same high level, or actually mounted to higher levels Since Means and Aub have shown a similar drop for rest alone, or for rest with sedatives (barbital, paraldehyd, bromids and quinin), it is more than probable that the rest, rather than the cacodylate, was responsible for the results obtained

Cyanids —On the basis of Hunt's[21] work, in which he showed a markedly increased tolerance for acetonitril in mice undergoing thyroid feeding, sodium cyanid, 3 mg, was administered two or three times daily to patients with exophthalmic goiter and toxic adenoma

19 Edsall D L and Means J H The Effect of Strychnin Caffein Atropin and Camphor on the Respiration and Respiratory Metabolism in Normal Human Subjects Arch Int Med 14 897 910 (Dec) 1914

20 Higgins H L and Means J H The Effect of Certain Drugs on the Respiration and Gaseous Metabolism in Normal Human Subjects J Pharmacol & Exper Therap 7 1 20 1915

21 Hunt R and Seidel A Studies on Thyroid I The Relation of Iodine to the Physiological Activity of Thyroid Preparations Bull 47 Hyg Lab U S P H S 1909 115 pp

TABLE 8—RESULT OF TREATMENT ON BASAL METABOLIC RATE IN TOXIC ADENOMA

No	Name	Sex	Initial Rate Date	Medical Treatment	Rate Following Medical Treatment Date	Surgical Treatment Date	Rate Following Surgical Treatment Date	Comment
1	E	♂	+48 3/13/20	None		Lobectomy 3/14/20	+12 3/22/20	
2	P 16862	♀	+28	Three months rest bromids	+ 5	Lobectomy 3/1/20		Cardiac type syphilitic
3	K L 18313 17948	♀	+18	Two weeks in bed	+27	Lobectomy 2/26/20	+18 3/9/20	Simple adenoma patient developed toxic symptoms after infection and potassium iodid treatment
4	D T 18351	♀	+15	Six weeks in bed	+16	Removal of adenoma 4/9/20	— 6 4/17/20	Markedly improved clinically cho reform movements ceased
5	B W 18629	♀	+15 +23 +21	1/10 grain sodium cyanid daily for four days	+30 4/18/20 +44 8	4 roentgen ray treatments 1 week apart	+33 5/1/20	Two weeks of cyanid, rate increased to +45
6	H O 18730	♀	+20	Cyanid 13 days	+12 4/14/20 +25 4/17/20 +24 4/24/20	Roentgen ray treatments 4/24/20 to 5/11/20 adenoma removed	+33 5/4/20	

TABLE 9—BASAL METABOLIC RATE IN PITUITARY DISEASES

No	Patient	Age	Sex	Diagnosis	Initial Rate Date	Treatment	Rate While Under Treatment	Comment
1	L K 18731	33	♀	Diabetes insipidus	+30 3/13/20 —8 4/18/20	Pituitary extract by hypodermic	+5* 3/20/20 +13 4/20/20	Urine reduced from 11 to 3 5 liters
2	H O 293184	30	♂	Diabetes insipidus	—10 3/31/20	Pituitary extract	—4 4/19/20	Urine reduced from 10 to 2 liters
3	C M	30	♀	Diabetes insipidus	— 1 4/3/20	Pituitary extract	—1 4/19/20 +2 4/20/20	Urine reduced from 10 to 2 liters
4	H N	28	♂	Diabetes insipidus	— 1 4/3/20	Pituitary extract	—1 4/19/20 +2 4/20/20	Urine reduced from 12 to 2 5 liters
5	M L, 18614	53	♀	Diabetes insipidus	+20 3/30/20	Pituitary extract by hypodermic posterior lobe feeding	+10* 3/26/20 +38 4/3/20	Urine reduced from 9 to 1 5 liters
6	E T O P	20	♀	Frohlich's syndrome	+16 3/7/20	Anterior lobe feeding 5 grains 3 times daily for 10 days	—12 4/11/20	
7	L T B O P	24	♂	Frohlich s syndrome	—19 12/15/19	Anterior lobe 45 grains a day thyroxin 2 mg every 3d day for 5 doses anterior lobe feeding 45 grains a day thyroxin 2 mg every 3d day for 5 doses	—22 1/10/20 +53 4 2/11/20 —5 2/25/20 +30 4 3/29/20	

* The marked fall from the initial level may have resulted from confining the patient to bed

TABLE 10—EFFECTS OF DIETS ON BASAL METABOLIC RATE IN DIABETES

				Normal Diet			Starvation Diet Until Sugar Free				Highest Caloric Diet			
No	Patient	Age	Sex	Rate Date	Pulse	Weight Pounds	Days	Rate Date	Pulse	Weight Pounds	Calories Date	Rate Date	Pulse	Weight Pounds
1	P 18645	23	♂	—6 2/26/20	54	131 5	3	—20 3/31/20	52	127 5	1 220 4/17/20	—11 2 4/18/20	76	123
2	S 18299	43	♂	—7 2/11/20	80	139	5	—20 3 2/15/20	80	140 5	1 128	—10 3/11/20	68	131
3	B 18378	16	♂	+12 2/10/20	78	118	5	—7 2/20/20	50	118	1 508	—20 3/11/20	66	108
4	R McG 18670	79	♂	+4 5 3/29/20	70	145	1	+13* 3/31/20	56	141	1 900	—8 4/18/20	65	141 5
5	E 15728	54	♂	+12 9 3/29/20	80	110 5	Ulcer treatment	—7 4/1/20	60	110	Sippy 3 eggs daily	+0 9 4/18/20	55	110 5
6	L 18397	53	♀	—10 3 2/20/20	90	125	Intermittent 5 days	—16 1 3/4/20	65	118	Never more than 1 500			

* Patient suffering greatly from pain associated with gangrene of the toe

TABLE 11—EFFECTS OF CYANID ON BASAL METABOLIC RATE

No	Patient	Age	Sex	Diagnosis	Initial Rate Date	Treatment	Rate Following Treatment Date	Treatment	Rate Date	Comment
1	B W 18629	31	♀	Toxic adenoma	+23 3 4/1/20	1/20 grain sodium cyanid twice daily for 4 days	+30 2 4/9/20	Rest cyanid discontinued	+44 8 4/18/20	Patient growing more toxic cyanid has no effect
2	A L 18702	15	♂	Exophthalmic goiter	+18 9	1/20 grain sodium cyanid twice daily for 6 days	+31 8 4/14/20	Dose increased to 1/20 grain three times daily for 4 days	+33 2 4/18/20	Clinically unchanged
3	H O 18730	38	♀	Toxic adenoma cardiac type	+20 4/10/20	1/20 grain sodium cyanid twice daily for 6 days	+29 4 4/17/20	Cyanid continued	+24 4/24/20	Cyanid has no effect discontinued 4/24/20 +33 2 5/4/20
4	V Y 18763	31	♀	Exophthalmic goiter	+53 4/10/20	1/20 grain sodium cyanid twice daily for 3 days 1/20 grain sodium cyanid three times daily for 2 days	+32 5 4/17/20	Transferred to surgical department	+21 9 4/30/20	Rest may account for decrease in rate

In three instances an increased rate resulted (Table 11) This is in keeping with the findings of Loevenhart,[22] who demonstrated a definite stimulation of respiration following the intravenous use of small amounts of cyanid Whether or not this increase in rate persists was not determined, owing to some apprehension in regard to the continuous use of the drug

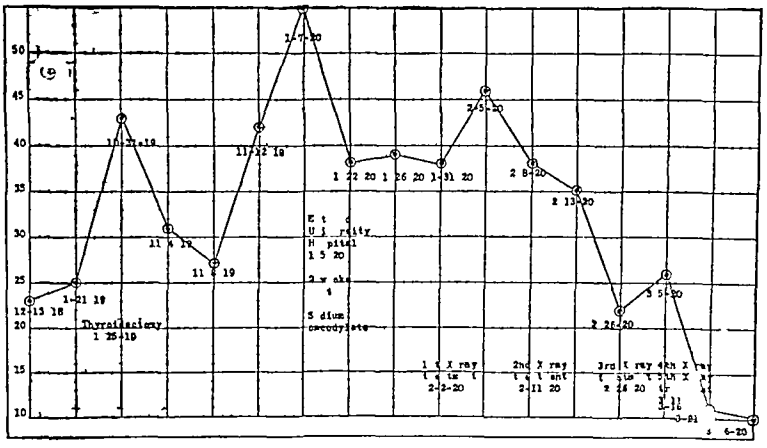

Fig 4—Metabolic rates in treated exophthalmic goiter

CONCLUSIONS

1 The gasometric method of indirect calorimetry is a reliable and practical clinical method for determining the basal metabolic rate

2 The basal metabolic rate is of the greatest significance in diseases of the endocrine system, particularly in diseases of the thyroid, revealing the extent of the increase in metabolism in exophthalmic goiter and in thyrotoxic adenoma, and the extent of the decrease in metabolism in cretinism and myxedema and allied conditions

3 The basal metabolic rate furnishes an accurate index to the results of medical and surgical treatment of these conditions, and thereby becomes of value as a guide to treatment

4 The basal metabolic rate is of value in revealing the effect of drugs on metabolism

ABSTRACT OF DISCUSSION

DR NELSON W JANNEY, Santa Barbara, Calif There is no more interesting proof of the value of pure research as applied to clinical medicine than the development of respiratory apparatus An expert clinical and technical staff and a very large sum of money are required to carry out determinations properly Recent developments are making it necessary to have at least a respiration apparatus in every medical clinic for it is of great aid in the diagnosis and treatment of thyroid conditions It is only fair to question a given laboratory as to the number of controls before accepting point blank even the basal metabolism results Dr Rowntree has shown care in his work of carrying out a sufficient number of controls before he used this method clinically We must demand this at present In our clinic cases are cropping up illustrating the possibility of a normal metabolism rate not always being an exact criterion of the patient's thyroid condition As a rule the return to normal of the respiratory rate is accompanied by marked improvement in the clinical symptoms We have a few cases of hypothyroidism which exhibit a normal metabolic rate over long periods without satisfactory clinical results I have also seen two cases of hypothyroidism, each having previously been subjected to a complete hysterectomy, in which it was impossible to bring the metabolic rate to normal without development of symptoms of a somewhat distressing nature, tachycardia, precordial distress and increase in nervousness It is a question as to whether the loss of ovarian secretion also causes a depression of basal metabolism This seems possible Cases of hypopituitarism which show a decreased basal metabolism are also of interest We have also observed a large fall in the metabolic rate (20 or 30 per cent, or even more) in diabetics undergoing long periods of undernutrition It seems as though we should consider the fact of a low diet depressing the metabolic rate We must, however, await further clinical observations before these points will be checked up satisfactorily

DR H S PLUMMER, Rochester, Minn Dr Rowntree's work corroborates what we have done at Rochester Since 1910 we have used a clinical chart in hyperthyroidism so as to get a definite rate in every case We differentiate between the rate from adenoma and the rate from exophthalmic goiter In adenoma we have a pure hyperthyroidism Exophthalmic goiter is not pure hyperthyroidism In one series of cases the average ran within 1 per cent of the average normal of approximately 39 calories per square meter, while in another series there was a deviation from normal in the basal rate A patient without a thyroid gland has a rate between 38 and 39 points below normal In general it takes about a calory of thyrotoxin to maintain the basal rate at normal In the first case I gave 15 mg of thyrotoxin intravenously This is equivalent to about 200 mg of thyroid extract The next morning the rate was —17 This gradually raised until on the eleventh day it was 17 per cent above normal It remained above normal six days and in three weeks reached its preintoxication rate This was the first attempt to establish the action and dose of thyrotoxin The average does not vary more than one point from the figures we have obtained in administering this in about forty cases of high-grade myxedema We have given thyrotoxin in various conditions and we never fail to get a rise in the metabolic rate except in cases of exophthalmic goiter with a high rate and in cases of large colloid goiters with a large blood supply In these cases we could give as high as 15 mg intravenously without any fluctuation in the rate. We could do the same in exophthalmic goiter Thyrotoxin has never fluctuated the rate in cases of exophthalmic goiter having a high rate I think this is due to the fact that the

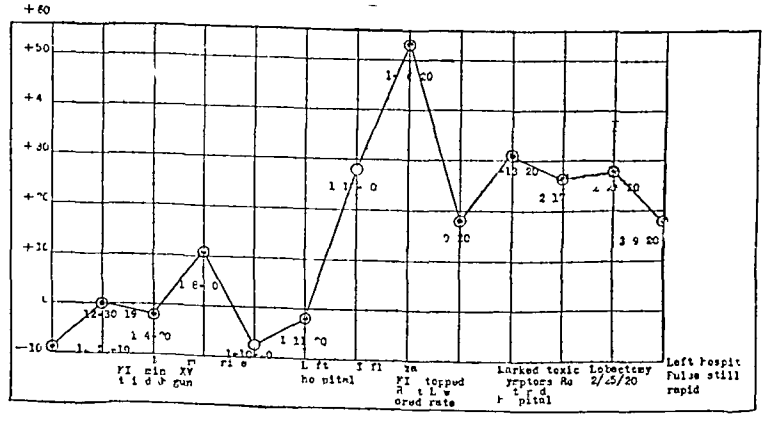

Fig 5—Simple adenomatous thyroid becoming toxic after potassium iodid and acute infection

22 Loevenhart A S Lorenz W F Martin H G and Malone J Y Stimulation of the Respiration by Sodium Cyanid and Its Clinical Application Arch Int Med 21 109 129 (Jan) 1918

gland picks up the thyrotoxin Thyrotoxin is also picked up by the adenomatous goiter If thyrotoxin is given by mouth there is no reaction When it is injected intravenously there is a notable increase in rate If a dose of thyrotoxin is given in other cases, there is a definite, progressive return to approximately normal unless complications are present in the case All the other cases respond to intravenous doses in just the same way A patient with a rate below 15 responds definitely to thyroid in myxedema—a differential point in diagnosis If you give ½ mg to a patient having no myxedema the rate remains normal Also, patients with myxedema do not seem to absorb desiccated thyroid or impure thyroid They are very much more apt to absorb pure thyroid All patients with a rate down require two or three times the normal amount of desiccated thyroid or thyrotoxin to bring the rate to normal Sometimes you can give 200 or 300 mg by mouth with a flicker in the rate, while 1 mg given intravenously will bring the rate up This has been very confusing Many myxedematous patients say they are well when they are not This same individual six or eight months later will have a normal rate and will be perfectly healthy Then again we get the patient who within six weeks after he has lost his entire thyroid gland has developed a high grade myxedema These patients will return to normal immediately on treatment. Young people who have been myxedematous for only a short time return to health

DR BRUCE C LOCKWOOD, Detroit As far as we know now the thyroid has control of the metabolic rate, and an increased basal metabolism means hyperthyroidism, that is, if properly measured and the extraneous influences such as undue excitement, exercise and recent eating are excluded Many patients formerly considered as psychoneurotics are really formes frustes cases of hyperthyroidism, and it is in this class of cases that the calorimeter has its greatest use We have had about twenty patients who were treated with the roentgen ray in conjunction with the usual medical treatment Our results have been excellent The treatments are given two weeks apart The basal metabolic rate falls about ten points with each treatment

DR. LEONARD G ROWNTREE, Minneapolis Figuratively speaking, by the use of thyroxin we can convert the sluggish toad into an active frog The effect following its intravenous injection is remarkable The cretins who before treatment may have been extremely sluggish, after treatment begin to walk, talk and become playful and kittenish It is rather interesting to note that the same type of reaction, i e, marked increased activity which accompanies the increased rate of hyperthyroidism as in exophthalmic goiter, is encountered on converting the low rate of hypothyroidism to that of normal The relative increase in rate is accompanied by marked increase in activity, although the absolute rate is only brought to normal We have had some difficulties with administration of thyroxin by mouth, but we have succeeded in holding some of the patients at a normal metabolism by oral administration Our purpose is to bring the patients to normal and to hold them there With intravenous administration we have never seen any reaction within twelve hours but have seen a large increase in the urinary output in from twelve to thirty-six hours In some instances the rate has returned to normal within five days, but in others not until the tenth or twelfth day The initial change particularly the marked increase in urinary output, which may precede the rise in the metabolic rate, is of interest The flushing of the face and the moisture of the skin may also appear early Following an operation for adenoma of the thyroid one girl went to bed and stayed there for ten years We thought perhaps it was an instance of astasia abasia She showed no signs of myxedema We gave her thyroxin over a period of weeks, she became active walked and finally left the hospital apparently normal She did not show any signs of myxedema, even with a rate of —30 The psychoneurotics interested us a great deal A high initial rate is almost constantly found in them The question arises Is this high basal rate normal for these individuals? In differentiating psychoneurosis from true hypothyroidism the time element is important In these cases a series of daily readings may show a plus 40, plus 30 and plus 15, etc. In some instances within three or four days the normal basal metabolic rates may be obtained We have had many cases where the rate has fallen to normal after operation, under which condition the roentgen ray is not necessary At present we have a series of patients undergoing roentgen-ray treatment This form of therapy should be tried at least in all cases where surgery has failed to effect a cure

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THE CAUSES OF EMOTIVITY, AND THEIR MANAGEMENT*

TOM A WILLIAMS, M D
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It is now a commonplace that perturbations of emotion are frequent causes, not only of inefficiency, but also of ill health of the body itself The physical consequences of emotion are well attested even in the laboratory To the physician, this knowledge, while a satisfaction, is only a preliminary to the search for its application to the cure of disease To this end he seeks, first, to recognize such diseases to differentiate them from others, and secondly, to remedy them Recognition is difficult, for the presence of an emotive state is not enough to signify that the disorder is primarily psychogenic

Many physical conditions are characterized by disturbances of feeling, emotion Intoxications, many infections and visceral diseases all disturb the emotions, and often seriously So do many diseases of the nervous system itself, such as cerebrospinal syphilis, disseminated sclerosis, neoplasms, and what are called the great psychoses These are all disorders of somatic source, the emotional disturbances being incidental, and not susceptible of being dealt with fruitfully by psychologic means, for only the disappearance of a diseased bodily state will dissipate the morbid emotion in cases of this kind

The emotions of psychologic origin are numerous They are not confined, as some writers would have us believe, to sexuality Not always are they the fruit of an internal conflict, not seldom are they quite independent of attempts to repress them

For instance, a woman was frequently and explicitly animated by an intense hatred of her mother-in-law which she made no attempt to repress or conceal This aversion she frankly expressed to her husband without any assuaging of the emotion, or of the suffering it induced although she recognized that for economic reason it was impossible to split up the household

Similarly of jealousy In a number of patients no repression has been attempted, and the jealousy has not even been deplored

Mortification is a very frequent disabling emotion It is based on shame and is always due to an inadequate envisagement of the situation This, in turn, has come about from imperfect knowledge of oneself, and this in turn has often been determined by circumstances giving a false perspective in relation to some mode of feeling or behavior Quite often this has to do with sex material, but quite as often it is due to social causes and the inculcations of others in the family, in school, in business or in society Intrinsically it is a fear mechanism, indeed fear is by far the

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commonest of the incommoding emotions When acting chronically it shows itself as anxiety, and is so frequent that some writers have given a special name to the state "anxiety neurosis" The French have further differentiated, and long ago called "anxiete" the more psychic manifestations, giving the name of "angoisse" when circulatory and respiratory manifestations are conspicuous It is the state which the Germans call "angst"

Not fear itself, but the feeling of impotence is sometimes the dominant emotion This may arise from a feeling of incongruity in the situation so marked as to appear insoluble In some temperaments, rebellion and struggle against this is quickly replaced by resignation This is particularly true of the incongruity which gives rise to the feelings of disillusionment This is an emotion most destructive to the employment of the full activity of the personality in work or in human relationships

It has been the fashion to say that the emotional aspect of all these situations is of transcendent importance in a psychotherapeutic sense This error is only another instance of the very common one in medicine of being unduly swayed by the conspicuous presenting symptom Surgeons have long ceased to depend for their judgments on the patient's idea of the relative importance of symptoms To the psychoneurotic patient, the emotion is all important To the discerning psychopathologist, the really important matter is the causative one Now, an emotional situation is very rarely direct One might almost say that it is invariably determined It may safely be postulated that emotion occurs only when the subject perceives an occasion for it The psychologic process is one dependent on sensation, perception, cognition—that is, intellection This is so even in a rudimentary instance, as that of instinctive reactions of animals, as the scuttling of fish at the sound of a footfall, or a horse running in terror from a strange object

The emotion is dependent on the perception Physiologically, too, it may be stated that an emotion is always conditioned by a perception This is just as true of emotions which appear autochthonous, endogenous The emotion originally induced by a former perception is now induced by the recollection of it However, through association another circumstance may supplement, or even be substituted in recollection for the original inducing circumstance, so that an idea apparently quite extraneous to the provocative one may seem at first sight quite incongruous with the emotion it seems to produce The reaction is then adjudged as a morbid one although in reality it is a perfectly natural response to circumstance The circumstance itself, indeed, in such cases is not merely what it appears There has always been added to it an element unperceived by the uninitiated, which is the real determinant of the emotion produced in the subject

For instance, listening to a sermon in a crowded church would not seem to be sufficient to arouse the emotion of terror to such an extent that it would prevent the subject thereafter from going to church, theater, or crossing the street It was only sufficient in virtue of its association with a faintness and oppression which had occurred on one occasion The significance of this association had not been grasped by the patient Indeed the circumstance was a memory apart It was only when the patient was made to grasp the real significance of this circumstance that her belief could be changed regarding situations which for eight years had been arousing terror and panic, and had brought her to such a degree of inefficiency that she could rarely bring herself to cross the street alone[1]

Even in the dream in which the content seems to be under the sway of the general feeling tone of the moment, in reality the direction of that feeling tone, and the elaboration of the imagery are dependent on former associations, which of course are the fruits of cognition

IMMEDIATE EMOTIONS

It is just as true that the material of brooding or rumination is very often determined, not intellectually, but by the feeling tone, and that the judgments are thereby vitiated The recognition of this is so universal, it is such a commonplace, that we can scarcely wonder that psychopathologists have carried into their studies of emotional manifestations the induction that the feeling tone determines the thought, forgetting entirely that while this is true, both of depressions and exaltations, yet that in the very different states of besetment the reverse is the case To specify, the common saying "to have a jaundiced view" represents the man whose feeling tone, disturbed by physical agents, permits him to harmonize only with depressing circumstances The disordered metabolism of the constipated or the hyperproteotic disturbs the feelings, so that automatically unfavorable or depressing points of view are more easily adopted than cheerful ones The consumptive, whose metabolism is speeded up to produce reactions by which to cope with the invasions of the tubercle bacillus, finds his feeling tone stimulated and active, hence he is in harmony with cheerful, hope-giving situations, and passes by without notice the circumstances of depressing character None of these reactions, nor the many others like them, are ratiocinative They are purely instinctive and depend on autonomic states They are not controllable directly by will The impotence of psychotherapy in such situations is represented by the adage "Never yet saw one a philosopher with the toothache" It is a truism in business not to expect a judicial decision the morning after a debauch

THE MEDIATE OR INDUCED EMOTIONS

The contrary mechanism is so simply exemplified experimentally during the study of the secretory sequences of emotion that it is surprising that there are still those who fail to give it due significance In all the experimental instances it is necessary to provoke the emotion studied by first inducing the cognition of the situation by the animal or the human being experimented on But without any experimental instances we can again resort to common experience in studying the effect of bereavement or ruin of the mechanism which determines the stampede of a crowd, of the various methods of suggestion, such as the flowing of tears in witnessing a melodrama, or the indignation at the abominableness of the villain in a romance

Such emotions as the anxiety so often contingent on the accomplishment of work under another, or the fear of losing one's position, or the fear of failure, when analyzed, will always be found to hinge on apperceptions

No situation apperceived can be divorced from elements contributed by the percipient To no two men

1 Agoraphobia and Claustrophobia Removed in a Week Philadelphia Neurological Association A complete discussion of this case is given International Clinics 4, 1919 under the title Differentia of Phobias and Obsessions

is a given situation alike This has been expressed in Hamlet by the remark "There is nothing either good or bad, but thinking makes it so" It is, therefore, the patient's attitude of mind toward the situation that develops the emotion regarding it which disturbs him

As a matter of fact, however, this is not autochthonous It is invariably induced The induction is usually performed by the mechanism of suggestion This may occur at the moment itself through the word of another directly applied, as when the nurse says to a child, "Do not be afraid," thereby clothing the situation with the idea of danger, regarding which the emotion of fear is legitimate The suggestion, however, is usually far less simple, and often depends on a logical induction, though of course always unaccompanied by full knowledge of true relationships For instance, the so-called birth phantasies are frequently constructions of a child's imagination fabricating an explanation by conjoining, with the untruths he has been told, the facts he has observed

Too frequently to the child are presented utterances in which error or mystery is implicit Over and over again do psychopathologists find constructs arising logically from material in which the careless word of an elder did not recognize the implicit emotion for the child

For instance, a feeling of impotence and hence a diffident emotion regarding the subject of Latin was the unfortunate heritage donated to a boy by the injudicious insistence of an elder brother that he was too stupid to study the classics The fixed idea that resulted vitiated his life by turning him in an artistic direction for which he was ill fitted and preventing him from going into professional life for which his scientific mind would have been admirably adapted

A woman acquired a habit of mumbling because as a child she was ridiculed on account of the shape of her mouth and its size when she laughed In the endeavor to minimize the conspicuousness she avoided opening the teeth widely with extensive movements of the lips thereby affecting the distinctness of her articulation

Indeed, stammering is very frequently induced by dread of making an error of speech, or misstatement of fact, or of saying something that will arouse mockery The induction of this emotion is a function of overstressing by parents or guardian, which acts through a mechanism involving in the speech what golfers call of stroke, "pressing" Having failed several times, especially after ridicule, the child is expectant of future failure and becomes ashamed of it In consequence, he develops phobia at the prospect The phobic state in turn induces such physical consequence as embarrassed respiration and tautening of phonatory muscles This in turn may lead to the use of artificial devices in speech, which temporarily assist, but eventually have also to be got rid of when the stammering is dealt with

THE PRINCIPLE

All this psychologizing would be superfluous were it not that it is absolutely essential for the clear understanding of the principle of the induction of emotion It is by a grasp of this principle that the psychotherapeutist can best recondition his patients' reactions in such a way that circumstances which formerly induced distressing or incapacitating emotions shall no longer do so This is most easily done by the patient when he is made to ascertain the component of the situation which really induces the fear In consequence he can then imbue the situation with the feeling which to it is legitimate This readjustment cannot always be effected at once Practice may be required in concentrating on the efforts needed, for in some individuals the very attempt to consider the situation at all calls into play the very emotion which the whole process is designed to undermine This, however, is merely a matter of habit, and with practice does not take long to overcome Very often the reconditioning is precipitate if not at the first interview then as a culmination or explosion, so to speak, of a consistent effort during several days It may take even longer

Obsession in these cases is merely the haunting of the patient by an idea distasteful to him because of some emotion accompanying it The distress experienced by these patients during their ruminations is a legitimate enough accompaniment of their failure to direct their thoughts into channels which they believe are more proper or useful But for the emotional element of the obsession it would cease to beset

Of the tics, which are impulsions, and of course psychogenic, the same thing is true They are derived from a movement of purposive intent The movement has been originally adopted either to avoid discomfort in the part moved, or in response to reactions toward psychologic discomfort

Thus one woman felt impelled to turn her head to the right and behind because there sat a fellow worker with whom she urgently desired an explanation regarding a misunderstanding

Another woman turned her head to the side away from which her niece used to walk because of the fact that this girl had become engaged to a foreigner, and the aunt was strongly imbued by the belief that marriages with foreigners turned out badly, this because of her experience with many in her family and among her friends Hence, she could not bear to look at her niece on account of the apprehensive grief at the prospect of losing her to misfortune

Of course, the patients were not aware of these reasons They had to be sought

MANAGEMENT

The treatment of morbid emotions of this kind, then, depends on the finding of the situation, the prospect of which determines the emotion It is with the cognitive element of this that we must deal by persuasion Although we say that we change the mental attitude of the patient, we in reality change the situation itself by adding to it or subtracting from it the elements which arouse the incommoding emotion

To do this is an art, and of course requires practice, but no amount of practice is of value unless the mind of the operator is directed toward the proper steps to be taken in performing his physiologic operations

EXTRAMURAL METHODS

It is true that similar reconditioning of mental attitudes and changing of emotions have always been accomplished by means of religion, philosophy, through charlatans, and by accident, but these agencies all possess serious inconveniences [illegible] modification of the patient's religious beliefs [illegible] legitimate function of a physician [illegible] psychotherapy by priests is ineffectual because they have not acquired the knowledge of neurology, without which [illegible] are inevitable, nor do they know

chology necessary for psychotherapeutic reconstruction Indeed, this kind of psychology requires as an essential basis a sound knowledge of physiology, as well as a very thorough knowledge of clinical psychopathology

Thus, a sea captain was referred because of distressing facial tics which prevented him opening the eyes at will, so that he could not go about alone without great distress, and could not read at all The tic was the product of the anxiety induced by intense naval responsibility during the war The systolic blood pressure was found to be 107, and the diastolic, 63 This I attributed to depleted endocrines Suprarenal substance quickly raised it to 152 systolic, 108 diastolic, more in conformity with the state of stress at his age, 50 The stoppage of suprarenal substance and reduction of protein then permitted a fall to his norm, systolic 125 diastolic 90 the psychotherapy that cured the tic having also permitted recuperation from exhaustion

Laymen are not trained to make differentiations of this kind, and the need for them is constant in the practice of medicine, to which the psychologic branch is no exception

The same reasons make dangerous the work of philosophers and psychologists with these patients It is still more true of the pseudoscientific modern religious movements which have healing as a function In one of them, indeed, a destructive negativism is the keystone of the treatment If the patient can be made to believe that no situation is evil, that which has aroused his inconvenient emotions necessarily ceases to do so, but the negation of reality is far too heavy a price to pay for the dispersal of an inconvenient emotion The remedy is worse than the disease

Thus, exhaustion is not only a cause of emotivity, but in some instances it is caused by prolonged emotions The intricateness of these mechanisms is one of the vicious circles so much spoken of many years ago Proper delving into genesis eliminates much of the imprecision attached to these cases

The occasional removal of emotion by charlatans is effected by suggestions usually masked in physical measures, which then act by chance in accordance with the principles set forth in this presentation, namely, the reconditioning of the patient's attitude toward the situation But when the charlatan does so, it is by accident, so to speak, and without the least knowledge of the great principle at work, hence he very frequently misses fire

Accidents are sometimes efficient

Such was the case of the man who had not walked for seven years after a street car accident for which he was heavily indemnified until one night after the plaster fell from the roof his wife found him sitting in the chair in the corner of the room trembling with fright Thereupon she induced him to make the necessary efforts to stand and walk, the success of which dissipated his phobia regarding his power of maintaining equilibrium

As against the numerous failures of any of these methods, the almost universal success of the sound method of rational persuasion forms a striking contrast My personal experience of twelve years shows that it is quite unusual that a morbid emotion cannot be dispelled and permanently so, and that the time taken to do so is more often less than a week than more than a month The cure of emotions in military life, as during the great war, shows that these pretensions are well justified, and that such success should be the rule and not the exception

ABSTRACT OF DISCUSSION

DR JULIUS GRINKER, Chicago There is no doubt that Freudism is responsible for a flood of publications of the type that Dr Williams has given us today, and many of these papers differ from each other only in that they use another phraseology To practice neurology successfully, we must follow the various methods of psychotherapy and choose the method that will suit the individual case A neurologist who knows how to get into the psychology of the neurotic will be able in most instances to get at etiologic factors without much trouble But this alone does not cure the patient It is a question largely of the susceptibility of the patient to suggestion, and no matter how I may struggle against accepting such a view, I think after all the successful treatment of the neuroses is due entirely to suggestion

DR DAVID S BOOTH, St Louis I have not been able to get away from the physical basis of the psychoses I believe that the fundamental element in the production of these psychoneuroses is in the anatomy or physiology or histology, whichever one may appear in a given case I have not yet accepted the theory that these conditions are caused by suggestion or that they are cured by suggestion entirely The fact that many of these patients recognize the error of their obsessions shows that they cannot be cured, in all cases at any rate, by suggestion Such cases show that the disease is not caused by the idea, but by some physical condition of the body The basis is there, and the idea is the result of this anomaly Faith cure, or psychotherapy, if you want to give it a name that will be accepted by the medical profession, simply gives these people a settled philosophy of life If their condition is not severe, by which I mean if the changes in the nervous system are not great, they will, perhaps, recover from that treatment alone But I believe that in all cases the physical basis of the condition should be treated, at least in conjunction with the mental element

DR HYMAN CLIMENKO, New York There are distinct psychic traumas, distinct psychic conditions, that produce neuroses and these neuroses are cured by psychic methods, whether Freudian or Christian science or rabbinical, etc, does not matter The Freudians have contributed largely to the study of psychology, although they have not in the matter of treatment and cure I know of many cases in which psychanalysis has aggravated the condition Dr Williams mentioned high blood pressure This is often produced by psychic trauma, in which case, the high blood pressure will be reduced simply by talking with the patient and appealing to his reason in other words, using one or the other type of psychotherapy

DR KARL A MENNINGER, Topeka Kan There is constant talk about curing patients by "persuasion," by "suggestion, by "explanation," by "analysis" but by what particular technic is rarely indicated It is rarely clear whose method is used or what particular steps are taken, consequently these men only encourage the skepticism of those whom they would convert I suggest that they come to this meeting and stage an impromptu session of this kind, have a voluntary patient from among ourselves come forward and be treated by the method of the author's choice, here in front of us all Then all may see what the psychotherapists do instead of hearing about persuasion or reeducation or readjustment by name only which never gives much to some of us because we do not know what the psychotherapist does when he does it, or what he means when he says it

DR C F NEW Indianapolis In regard to the psychogenic origin of the underlying ideas of anxiety, which is the basis of the majority of the fears which beset these patients A close analysis of a large percentage of these conditions will disclose the fact that there is an underlying source of worry which the patient is trying to overcome and which he does not want any one else to know about, and until that phase of the condition is cleared up or it is suppressed there is no peace of mind for that individual, no matter what you do Before any psychotherapist or anybody else can make any impression he must secure the confidence of the patient, and the best way to do this is by detailed, careful examination of the patient, his history and his present condition

DR ROSS MOORE Los Angeles One neurologist will say that it is impossible to make these people better, while another will say that a great deal can be done by psychotherapy Both are right, although seemingly opposed to each other, and the reason is this One man has in mind the classification which refers to the individual whom I call the essential inadequate—the individual who is narrow and cannot be otherwise

DR. G H BENTON, Miami Fla Even here, before a body of neurologists and psychiatrists, the personal reaction to the words psychanalysis and psychotherapeutics tends to bring about at once a very marked personal equation, individual in character, and of emotive quality This is the very thing that is occurring continually in psychoneurotic patients who are very limited in their field of apperception Therefore, they lack judgment. Their emotivity has a great range and is very vacillating but the means which we use to reach them, or in other words, the tools we use, remind me very much of our automobiles They are selected by virtue of our particular choice, but we all "get there' just the same And so it is with the neuroses We accomplish results first, by our own understanding of the case, through our own methods, by our own individual possibilities by first determining what exists and then by inquiring of the patient what does this mean to you what does that mean to you what does this situation lead to and how do you react to it and then, by trying to interpret these things and to determine further if the patient actually understands the words we use as we understand them We often observe ourselves jumping around from one theory to another because it does not quite appeal to us or because we can find methods by which we can reach our patients and help them in spite of the individual equation—the patient himself The personal equation is one of the greatest difficulties we have to contend with This involves the personal equation of the physician as well as the personal equation of the patient We are dealing with these things in our hospitals for the psychoneurotics We are able to reach them to a greater or lesser extent but through very varied methods Some are brought back to their former mental and physical level, others somewhat above that level Although sometimes an immense amount of time is spent to attain the results and to insure their permeability, we are getting at it in our own individual ways

DR GUSTAVE ROUSSY Paris France (Translation by Dr Williams) Babinski has long maintained that emotion is only an accessory or adjunct factor in these cases, the real factor being the suggestion, and that the emotion quickly disappears when counter suggestions are made On the other hand Dr Roussy and his colleagues along with Professor Dejerine, contend that the emotion is rather the primitive factor, because people are constitutionally or otherwise overemotional, and they react in this way to the occasions which arouse the emotion They think that their experience in the war confirms this opinion, while Babinski and his followers believe that the war confirms theirs

DR GEORGE A MOLFEN, Denver I think we are privileged to speak of the neuroses as attributable to high elevations, since we find that the susceptibility to this emotional shock, to suggestion to the other irritable influences disappears when these persons seek the lower levels such as the seashore Some persons cannot live in the high altitudes because of the nervousness induced thereby They could go to the seashore and become quite relieved and comparatively calm In the war department manual is given a very clear description of the increase in nervous excitability experienced in high elevations This, as I pointed out sometime ago, is due in large measure to the lowering of the blood values, the cellular and chemical elements, particularly the hemoglobin Of course, we recognize the importance of constitutional inferiority and the relation of this constitutional inferiority to the endocrines as well as the conditions on which these high degrees of suggestibility may be premised Not only do we have disturbances due to the hemoglobin and corpuscular diminution which was observed by Haldane Barcroft and the men who headed the Anglo-American Pike's Peak expedition establishing the data with reference to the blood but we can also look to the calcium deficiency as reducing the stabilizing character of the protoplasm so far as irritability is concerned I do not believe that we should rely too strongly on the external influences, although they have their exciting possibilities but we must also keep in mind the somatic disturbances and those forces which relate particularly to the body metabolism

DR TOM A WILLIAMS Washington D C In my paper I adequately took care of all the physical causes which some speakers have brought forward Such conditions as essential inadequacy or constitutional psychopathy we are not considering What Dr Neu said is justified—we must make the patient cure himself When dealing with an inadequate one cannot expect of him what you would expect of a normal man I deal here therapeutically only with cases in which the induction is purely psychogenic In certain physical states the emotivity is exalted In hyperthyroidism for instance all these factors are highly exalted you cannot expect to cure that patient's emotivity by psychotherapy We can only carry these cases along and help the physical treatment Babinski has helped us to differentiate between organic and functional nervous disease The differentiation depends largely on the anamneses and partly on the results of treatment I tried to emphasize that all the emotive reactions of the kind of cases I speak of are purely secondary to the conditioning of an apperception just as the animal which reacts from the emotive standpoint does so simply because of the apperception of the bell and the meaning attached to bells As to the challenge to demonstrate a particular method I am willing to do it provided the right kind of case is selected and inasmuch as certain patients have difficulty in doing this before audiences we must have privacy, and a patient should be chosen in whom a rapid cure is possible and there are many In the long standing cases that does not suffice we must penetrate to the foundations of this thing find the mechanism and reorientate the patient It takes longer and one has to be familiar with psychopathic disease It is not a matter of phraseology it is a matter of principle Suggestion must be religiously avoided It is not upbuilding

We do not need to interpret these things by dualistic philosophy It is a monistic phenomenon purely Psychologic reactions are physical reactions in reality stated however, dynamically and qualitatively only as against those of the chemist which are stated ponderately, and those of the physicist which are stated quantitatively

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ENDOCRINE IMBALANCE IN THE FEEBLEMINDED*

OSCAR J RAEDER M D
BOSTON

The close relationship that exists between the internal secretions and the central nervous system has long been known The fine changes of temperament associated with the early stages of pregnancy, the varying neurotic conditions, from slight unrest to grave neurasthenia that result from a dysthyreosis is common knowledge of the observant internist and the trained neuropsychiatrist So impressed were the ancients with the relation of the generative and gonadal influences on the mentality that they regarded the seat of hysteria in the uterus and named it accordingly Cretinism is an example of a recognized endocrinopathy The constant association of the athyreosis with the marked hypophrenia and microsomia disproportionate tissue growth, and other characteristics, stamp it as a frank ductless gland disease The marked resem

* From the Laboratories of the Massachusetts State Psychopathic Institute
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blance of certain factors in other kinds of feeblemindedness with developmental anomalies, uneven growth rate,[1] and various general and special tissue changes to the cretinic hypophrenia, has shown the desirability of further information in regard to the endocrinous factors in feeblemindedness in general

From the results of careful experimentation in physiology and biochemistry, and accurate clinical observation verified by pathologic study both during life and after death modern scientific opinion is agreed that the development and growth of the animal organism is regulated to a great extent by definite and potent highly complex chemical substances called hormones, the internal secretions of the ductless glands A constant change in the chemical balance occurs with the progressive periods of growth, more or less independent from the daily or continuous physiochemical balancing of the metabolic functions of the cytoplasm constituting the immediate life

Besides this hormonic or chemical connection or interrelation between the various parts of the body we have another system which binds the parts together, namely, the neuronic or nervous system It is by a smooth and well-ordered interworking of the neuronic and hormonic connecting systems that a being is kept in normal poise An interruption of the nervous or electrical control, or a disproportion between the various elementary substances or internal secretions forming the chemical combining system, or an altered condition of one or more of the constituent hormones will destroy the balance between the two systems and result in an abnormal or pathologic state

A great deal of attention and research has been devoted to the nervous control both of the body and also its influence on the glands of internal secretion I now propose to study the relationship to, and effects of, the internal secretions on the nervous system As regulators of metabolism, to use the words of Noel Paton, they exert an influence on the growth and function of the brain and nervous system in general, as well as on the rest of the organism

As a basis for this study, 100 cases of feeblemindedness that came to necropsy have been taken in chronological order from the pathologic service of the Massachusetts Commission on Mental Diseases They include cases from the Massachusetts schools for the feebleminded at Waverley and Wrentham, and from other state hospitals

The cases had been studied clinically in the routine method at the various institutions and after the standardized system developed by Dr W E Fernald at the Waverley School, including Binet-Simon intelligence ratings The necropsies were complete, including head, cord and soma in all cases, and were performed by Drs M M Canavan and D A Thom according to the inclusive method outlined by Southard The data, clinical and postmortem, were all collected in the usual way, symptoms and signs and pathologic changes and findings being noted by the regular examination methods Thus, neither during life nor at necropsy was there any particular or special attention given from the endocrine point of view

Data have been collected from a gross pathologic study of this series of brains and somatic organs, especially the ductless glands In one third of the cases a microscopic examination of the glands was also made Aplasia, hyperplasia, pigmentation and interstitial change not due to age, glandular proliferation, anomalies such as absence or accessory organs with lessened or increased function, besides special changes in the secreting epitheliums and cells of the individual and various glands are the main factors included in our summation of the changes

In a previous study,[2] the question of syphilis was considered Attributing inflammatory and exudative changes, such as early arteriosclerosis, aneurysm, chronic periostitis, saddle nose, chronic meningitis and vascular changes of a doubtful nature to syphilis, we found eleven cases among those in which there were gland changes Wassermann reactions were not obtained in many of these cases, so that reliance on grosser pathology was necessary

TABLE 1.—GLAND CHANGES

	Number
Extreme	10
Marked	11
Moderate	53
Absent	26

The incidence of glandular change is shown in Table 1 Under the designation "extreme changes" are classed those cases in which three or four glands were involved and in which there were marked anomalies of growth, underdevelopment, disproportion of body parts, such conditions as dystrophia adiposogenitalis, etc There were two cretins

In the second group eleven cases showed marked endocrine signs, in which at least two glands were involved, correlated with distinct changes in growth and anomalous development Combining the first two groups, we have 21 per cent of cases showing presumptive evidence of marked internal secretory disturbance

The third group included fifty-three cases in which changes of one or two glands were demonstrable, with irregular and unusual combinations

Gland changes were entirely absent in twenty-six cases

TABLE 2.—PERCENTILE ANOMALIES

	External	Visceral	Cerebral
Paresis (100 cases)	23	29	27
Hypophrenia (60 Cases)	73	58	75

A tabulation of anomalies (Table 2) divided into external somatic, visceral, including the ductless glands, and cerebral, showed an interesting comparison In the absence of data on normal individuals, 100 cases of paresis were selected Paresis being in each case an acquired disease, it was assumed that they might be potentially representative of the normal type[3]

The marked preponderance of anomalous manifestation in the feebleminded over the cases of acquired disease is striking Attention is called especially to the third or cerebral group, in which 75 per cent of hypophrenics showed anomalies, compared with only 27 per cent of the acquired-disease cases, as significant of a possible influence of the growth regulating secretions on the development of the brain

Among anomalies of development the stature first demands attention Our observations on height

1 Coddard H H Height and Weight in Feebleminded Children in American Institutions J Nerv & Ment Di 39 April 1912

2 Raeder O J A General Nosological Grouping of One Hundred Autopsied Cases of Feeblemindedness presented before the New England Society of Psychiatry September 1919

3 Only sixty of the hundred cases were selected to compare with the 100 cases of acquired disease because the combined 160 necropsies were performed by the same hand insuring a more even and regular observation

agree in a general way with those of Shuttleworth[4] Tarbell,[5] Wylie[6] and the compilation of statistics by Goddard[1] in that we found the majority of patients undersized In Table 3, percentile figures show 60 per cent varying from the normal, of which 51 per cent were undersized and 9 per cent taller than the normal given for their ages Thirty-eight per cent were normal, allowing a variation of 10 cm as within normal limits Data were not available in 2 per cent

TABLE 3—HYPOPHRENIA STATURE IN ONE HUNDRED CASES

	Per Cent
Undersized	51
Oversized	9
Normal (± 5 cm)	38
Unknown	2

The question of growth has been studied experimentally in tadpoles by the feeding of various ductless gland substances in the laboratories of Gudernatsch and others Gudernatsch[7] has shown that tadpoles fed with thymus are overgrown and underdeveloped, also that examples of the same hatching fed on thyroid develop more quickly, but at the expense of size and weight

In the curves on growth, Tarbell,[5] and especially Goddard,[1] have shown that hypophrenics grow faster but stop sooner than normal children Allowing for differences in comparative anatomy, the question arises whether this phenomenon may not be due to an imbalance of the thymus and possibly later also of the pituitary gland Certainly the same overgrowth of the thymus-fed tadpole corresponding to increased height and weight in the preadolescent stage of the feebleminded, as shown by Goddard's tables, and the underdevelopment or immaturity of the tadpole can be correlated later with the stunted development and hypophrenia of the abnormal child

The incidence of changes in the individual glands is shown in Table 4 The pituitary gland was found

TABLE 4—ADENOSES

	Per Cent
Thyroid	19
Pituitary	40
Suprarenal	27
Sex	38
Thymus	12
Others	6

involved oftener than any other gland, in 40 per cent of cases The sex glands, the seat of numerous anomalies which brought their score up considerably, were second with 38 per cent The suprarenal showed involvement in 27 per cent of the cases and the thyroid in 19 per cent It is noteworthy that the thyroid falls so low in the scale With the frequency of thyroid disturbances one might expect a larger number of cases showing a pathologic condition of the thyroid

Numerous cases showed various combinations of glands involved Table 5 gives the pituitary polyadenoses It was involved singly in fourteen cases Pituitary with gonads, in nine cases, was the most common dual adenosis, though there were combinations of sex and thyroid in four instances, sex and suprarenal in four cases, and in three cases the thyroid pituitary and gonads were affected in triple involvement

TABLE 5—POLYADENOSES

	Number
Pituitary	14
Pituitary Sex	9
Pituitary Suprarenal	5
Pituitary Other Glands	11

Furthermore, there were six cases in which the gonads were combined with three other glands, two included the gonads, thyroid, pituitary and suprarenal, two, gonads thyroid, pituitary and thymus

Of the third two in which thyroid, pituitary, suprarenal and sex glands were involved, one was a female cretin, and the other an obese eunuchoid idiot who had been castrated in early life He showed all the typical characteristics — undeveloped penis, and feminine appearance of breasts and extremities, with flabby pendulous abdomen

REPORT OF CASES

In order to illustrate the striking endocrine characteristics that were found in many cases of idiocy and imbecility, two of the cases have been individually charted and are shown in Figures 1 and 2

CASE 1—*History*—Figure 1 represents a male idiot, aged 10 years He was admitted to the Massachusetts School at the age of 6 He was 3 feet 9 inches tall and weighed 43 pounds, he was poorly developed and nourished, had chronic bronchitis had a dry, coarse skin and sparse coarse wiry hair, there was a systolic heart murmur at the apex, the genitalia were infantile, there was an umbilical hernia, a protruding abdomen and poorly developed muscles, the hands were thick and short with stubby fingers, the forehead was bulgy the face asymmetrical with large protruding ears, there was a chronic discharge from the nose, the tonsils were enlarged, with adenoids and a fissured tongue There was some question whether or not the patient was a cretinoid idiot

There were six children of whom the patient was the second The first three children resembled one another rather closely and all died at the Massachusetts School for the Feebleminded Three later children were normal, one dying in infancy of diphtheria An uncle and a sister of the patient had spinal trouble, the sister in question became partially blind There was a feebleminded and epileptic great aunt One of the mother's sisters was migrainous and obese, one living child of the sister had one arm not fully developed Both the patient's mother and maternal grandmother are stated to have been nervous and the patient's grandmother was also migrainous On the father's side one sibling was deformed with spinal curvature There was also an epileptic and feebleminded great-aunt

The patient began to talk at about 1 year and to walk alone at 19 months Peculiarities were first noted at 2 years The patient had a peculiarity in speech using d for the first letter He was able to help in dressing and undressing himself and to feed himself with a spoon or fork

School Progress School Examination, Practical Knowledge and *Economic Efficiency* were all nil

Social Reactions—The patient was stubborn and irritable running about in his own way screaming when touched to be dressed or undressed spitting on the floor and yelling if he did not wish to be moved he would not eat if any one was looking at him, he had lost capacity to feed himself throwing food about, he was attracted by striking colors in dress If given a toy he would go by himself to play with it screaming if another child went near him

4 Shuttleworth G E Health and Development of Idiots Compared with Mentally Sound Children Proc Assn Med Off Am Insts Id & F M 1876 1886 pp 315 322

5 Tarbell G G On Height and Weight and Relative Rate of Growth in Normal and Feebleminded Persons Proc Assn Med Off Am Instns Id & F M 1876 1886 pp 188 189

6 Wylie A R T Contribution to the Study of the Growth of the Feebleminded in Height and Weight, J Psyc Asthen S 2 7 (Sept) 1903

7 Gudernatsch J F Feeding Experiments on Tadpoles Arch f Entwickl d Organ 35, No 3 (Dec) 1912 Am J Anat 15 No 4 (Jan) 1914

Psychologic Test—The Binet test, performed in May, 1914 at the chronological age of 8 years, gave the mental rating at 1 year

Further History—The patient required nursery care He was in the hospital and infirmary most of the time with untidy habits He had frequent illnesses, including chickenpox measles, bronchitis and indigestion, he grew thin and developed a cough in November, 1915, he had a slight unilateral convulsion with twitching of the right side of the face There was severe dyspnea with mucus in the throat and a weak pulse The patient showed symptoms of meningitis and remained comatose Three days later slight paralysis of the right side developed, followed by death the next day The cause of death was meningo-encephalitis and hydrocephalus

In Figure 1 are shown, first, the small stature and general microsomia, secondly, hydrocephalus, this was considered as being evidence of syphilis A postmortem Wassermann test was negative on the serum, thirdly various dystrichoses, namely, hairy growth over the chest and abdomen upper arms and forearms, abundant hair on back and neck with absence of crines pubis and axillary hair Over the head it was coarse and rough and arranged in multiple cowlicks, fourthly, microphallus, the penis being small with redundant prepuce Besides these anomalies and abnormalities the pituitary was cystic and there was little sign of activity in the secreting cells of the anterior lobe and marked increase in the pigmentation of the posterior lobe cells

ENDOCRINOSIS IDIOT
MICROSOMIA
HYDROCEPHALUS
DYSTRICHOSES
MICROPHALLUS
HYPOPHYSITIS
LYMPHNODITIS

Fig 1—Case 1

ENDOCRINOSIS MONGOLIAN IDIOT
MICROSOMIA
HYPOTHYREOSIS
HYPO ADRENIA
HYPERTHYMIA
OVARITIS
HYPOPHYSITIS
LYMPHNODITIS
DYSGENITALISM

Fig 2—Case 2

CASE 2—*History*—Figure 2 represents a female Mongolian, aged 18 years who rated 3½ by the Binet intelligence scale She was admitted to the Massachusetts School at 8 years of age At 17 she was 4 feet 6½ inches tall and weighed 72½ pounds She later increased 12 pounds in weight The patient was fairly well developed and nourished she was a mouth breather The skin was coarse the circulation poor, the heart sounds weak with systolic murmur at the apex, the heart was enlarged the fingers and toes were short and blunt, the face was asymmetrical the eyelids were inflamed the nose flattened the tonsils large and the tongue fissured The Wassermann test was negative

The patient was the first born of two children The younger brother is normal The father had an enlarged heart he was of a gouty asthmatic diathesis and died of a paralytic shock He had an epileptic seizure at the age of 30 and two more after marriage one just previous to the birth of the patient He had a violent temper and was subject to severe headaches The parental fraternity was further checkered with nervosity and paralysis agitans, and there was a question of insanity On the mother's side two brothers were epileptic and a sister was backward Two brothers and one sister are described as normal A distant cousin had schizophrenia and her brother was hypophrenic

Peculiarity in the patient was noticed at 1½ years She began to walk and talk at 2½ years, she was never able to say such words as or and if , she did not know the alphabet and could not read or count She was tidy and could aid in dressing and undressing herself, she could use a spoon but not a knife and fork nor could she tie her shoe strings She was described as sometimes obedient and as being fond of picture books and blocks

School Progress and *School Examination* were nil

Social Reactions—The patient was quiet and inattentive, her name had to be spoken to attract her attention

Waverley School History—The training class records show a deficiency in industrial adaptability At 12 years she was described as clever at playing simple games, catching a ball, etc Later on after the age of 12 she learned to sew and use scissors well From 1905 to 1909 (age 9 to 13 years) she showed slow but definite improvement She had changed under training from a repulsive, drooling finger-sucking, untidy, stupid patient taking short, choppy steps, to a tidy patient who had completed the first school course and had begun to take part in manual training Her resistance to disease was low, she was subject to infections of various kinds She was admitted to the hospital ward, April 23, 1915 with severe bronchitis and pleurisy She died of tuberculous bronchopneumonia May 26 1915

She was of the usual Mongolian type with the characteristic tissue and developmental changes In Figure 2 we have abridged the enumeration of these characteristics, showing microsomia, very small thyroid and suprarenals, hyperplastic thymus an interstitial inflammation of the ovaries and hypophysis a general lymphnoditis, including tonsils and adenoids and dysgenitalism in the form of unequal labia majora long urogenital cleft, large, prominent clitoris and a high position of the mammae

Three of the Mongolians showed extreme glandular change, one showed marked involvement, and the fifth one moderate dysadenosis Thus all five cases of Mongolianism showed gland changes besides the usual typical characteristics

SUMMARY

In this study, the developmental, tissue and gland changes have been charted in 100 cases of feeblemindedness that came to necropsy, taken in chronological order from the pathologic service of the Department of Mental Diseases of Massachusetts Data found in the case histories and necropsy protocols were gathered in the regular way without reference to the endocrine point of view It has been shown that 21 per cent of cases showed marked glandular involvement, with changes of a lesser degree in 53 per cent additional, making a total of 74 per cent in which there were signs of gland change In eleven of these there were signs of syphilis Not having Wassermann reactions in all cases, it may be argued that others of the glandular cases may have been syphilitic Vice versa, some of those designated as syphilitic because of vascular or chronic inflammatory or exudative changes, may not have been syphilitic Furthermore, the dysfunction of the endocrine system itself may be due in these cases to syphilitic influence on the secreting cells of the glands In Figure 1, though the hydrocephalus points to a possible syphilitic involvement, the Wassermann reaction was negative

The pituitary has been found invaded more often than any other gland The small stature so common in the feebleminded may be correlated with this fact, in view of the powerful influence of the pituitary gland on growth

The gonads were shown to be affected in 38 per cent of cases Also anomalous development was most rampant here This is not remarkable when the embryology of the genital tract is considered The similar, not to say identical, development of the urogenital tract in both sexes up to a certain embryologic stage, and then the more or less arbitrary determination for male or female would seem to give much more opportunity for anomalies, misdevelopments and malformations than in other parts of the organism where the developmental homonomy is not interrupted

Macroscopic studies of the brain anatomy have shown numerous reversive types and evidences of arrested development or maldevelopment Microcephaly, especially in the Mongolians, was common Macrogyria, in one instance almost to absence of any fissuring in the frontal regions of the two hemispheres, was of frequent occurrence Extraneous fissuring, "affenspalte" lateral inequality, microcerebellum correlated with sprawling gait, and deficiency of parietal and occipital lobes with various degrees of exposure of the cerebellum, were some of the more striking changes found in the encephalon

MICROSCOPIC EXAMINATION

Among the microscopic findings, interstitial change, aplasia, pigmentation and varied staining reactions were noted The pituitary was frequently found cystic, especially dilatation of the cleft in the pars intermedia The cells of the anterior lobe showed varied staining reaction, the most common change being a deficiency of basophil cells In the posterior lobes, marked pigmentation occurred in several instances in very young individuals

The aplastic condition of the thyroid was present in the cretins A hyperplasia of the glandular epithelium was noted in several cases, and increased interstitial elements were also common In one of the Mongolians an infantile condition of the thyroid with absence of colloid was noted In a few cases the vesicles were distended with colloid

The tests usually showed signs of activity in all except the lower grades The idiots' testes were either inactive and fibrous, or only feeble signs of spermatogenesis were found The ovary was examined in only a few cases, but seemed less virile than the male gonads Two cases of imbecility showed no ovarian activity, and in a third case only very slight evidence of function, one graafian follicle in a section, was found

No characteristic changes were found in the suprarenal gland In one case—a tuberculous subject—there was considerable involvement of both suprarenals with tubercles, numerous giant cells, etc There were no signs of Addison's disease present

CONCLUSIONS

1 The evidence of gland changes observed in these cases by routine examination methods, clinical and postmortem, without particular reference to endocrinology, is so constant and multifarious that we cannot but regard them most seriously There were gland changes of one sort or another in 74 per cent of cases Marked gland changes occurred in 21 per cent

2 With the constant and characteristic bony and soft tissue changes microsomia, lowered resistance to infection, poor circulation, loose jointedness, and changes in the glands of internal secretion, Mongolian idiocy bids fair to be founded on an endocrine pathology

3 The internal secretions begin to exert their influence early in the life of the organism It is known that permanent adjustments of the other glands and tissues follow on the absence or dysfunction of one gland or set of glands In order to avoid such permanent changes as infantilism dwarfism, acromegaly, microcephaly and feeblemindedness, it is imperative that these conditions be recognized and remedied by supplying the deficient hormone or inhibiting the hyperfunction of a gland early in the course of the disease After permanent adjustments have formed, improvement is difficult, with early treatment, results are often little short of marvelous

4 Much of the finer pathology of the ductless glands is concerned with biochemical reactions Further studies of feeblemindedness by physiochemical and roentgenologic research would no doubt throw more light on this obscure field

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ABSTRACT OF DISCUSSION

DR TOM A WILLIAMS, Washington, D C In the attempt to establish a correlation between endocrine deficiency and poor cerebral development we must avoid the danger of the *post hoc, propter hoc* argument Dr Raeder's theory may be tenable, but two objections occur to me

First, in relation to syphilis Syphilis affects all structures of the body and the feeblemindedness in congenital syphilitics may be primarily cerebral Therefore, in estimating a statistic it is perhaps fair to eliminate the cases of syphilis Secondly, we should have a control, namely postmortem examination of the bodies of a large number of dead persons Why say that in 100 necropsies certain evidences were found which tend to establish a correlation between endocrine deficiency and feeblemindedness, when these findings may be the effect of the disease which has terminated in death? These cases must be eliminated In regard to the microsomia of these patients, is it necessary that it be attributed to hypoendocrinia? Perhaps not Anomalies of growth are the result of endocrine disturbances, but is the growth of the individual who grows without anomalies dependent entirely on endocrine factors? It is doubtful whether we can include microsomia as one of the effects of endocrine disturbances

DR GUSTAVE ROUSSY, Paris, France (Translation by Dr Hitchcock) We must be cautious in our conclusions regarding the role of the endocrine glands, not too hastily deciding as to the absolute relations of cause and effect in regard to polyglandular syndromes Indeed, if one examines systematically the endocrine glands at necropsy on subjects dead of the most diverse affections, as I have done in more than 200 cases, there will be found lesions of several internal glands not usually occurring in this type of patient Besides the endocrines proper, other tissues are concerned In a case of Parkinson's disease I found lesions of the parathyroids The causes of lesions of the endocrine glands, as shown at necropsy, are numerous complex and inconstant, therefore it is prudent not to be hasty or final in drawing conclusions concerning these lesions

DR WALTER TIMME, New York The main difficulty with regard to all internal glandular disturbances is that we do not have a definite static series of organs The endocrine glands are all of a character designated in mathematics as variables, there are no constants In order to solve an equation or series of equations which involves variables you must have *one more equation than you have variables Here we* have from ten to fifteen variables and only one equation Hence we cannot solve the problem We can only approximate to a solution If Professor Roussy has examined at necropsy 300 cases of various diseases in which the endocrine glands were found to be involved then these disturbances are part of the process of the disease They may have been produced by the disease and they may have indicated the lethal termination In other words they are terminal states But when Professor Roussy states that the presence of such lesions in the feebleminded is nonconclusive as to the pathogenesis of feeblemindedness, I can only ask Do they not suggest a possible cause? Their absence would beyond peradventure be regarded as conclusive! Dr Raeder claims that in 100 cases of necropsy on the feebleminded he has seen a large proportion that showed definite changes in the internal glandular system He has approached the subject in a different way than it has ever been approached before and he has arrived at a definite, high percentage of disturbance in the endocrine glands His work presents a distinct advance, a new angle of attack in this pro[illegible] has attacked entirely on the psy[illegible]

little result If these disturbances of the internal secretory organs produce idiocy, why does not every disturbance of the internal glands produce idiocy? For this reason It depends on how the glands are constellated There are certain constellations of these glands which will produce a condition of diabetes, another which will produce giantism, a third acromegaly, a fourth Addison's disease, etc It depends on the subject's reaction to these disturbances as to which disease will develop I tried to bring this out in a table of endocrinopathic inheritance some years ago I examined every member of a family through four generations The original parents were a giant and a diabetic Through four generations there were all kinds of endocrine disturbances varying from exophthalmic goiter to microsomia, and including two morons Heretofore in investigating ancestry all we looked for was mental disease That is wrong, mental disease is only one phase of a disturbance, just as is epilepsy

DR. M A BLISS, St Louis It is only by such extensive studies as this, made under opportunities that come only to those who work in institutions of that size, that we shall be able eventually to arrive at some conclusions in regard to these things Dr Raeder has made a definite advance toward perhaps, finally reaching some conclusions about the association of the endocrine glands with these mental deficiencies and disturbances

DR. ANDREW L SKOOG, Kansas City, Mo The brain specimens presented by Dr Raeder are suggestive of hereditary disturbance or secondary anomaly of the brain developing at some early stage Those who have studied the cases of various types of idiocy will agree that the patients reach full development at an earlier age than does the average individual, and probably more so as related to the central nervous system

DR. KARL A MENNINGER, Topeka, Kan Work like this furthers the study of the interrelationships of physical and mental disease We have too long regarded the patient as carrying his brains in one basket and his visceral organs in another, and from our standpoint we have looked only at one basket Endocrinologists deserve praise for calling attention to their field of the human organism We have ignored a relationship which is far closer than we know at present, far more intimate and intricate, perhaps, than we even suspect

DR OSCAR J RAEDER, Boston Syphilis is to be considered in all cases of feeblemindedness Fifteen per cent of our 100 cases were syphilitic, only two of the twenty-one endocrine cases were suspiciously syphilitic, but we had no Wassermann in these cases Some of these cases date back as far as eight or nine years, before the Wassermann test was so regularly done as now In necropsies on the insane and the feebleminded we frequently find gland changes and many of them are terminal changes I would not assign that as a cause of feeblemindedness if the patient had been feebleminded Such lesions frequently are found in necropsies, especially in senile cases Dr Timme regards feeblemindedness as one manifestation only in an endocrinologic heredity In every biologic study the relation of the endocrinologic factors to growth and development is very important, as has been shown in experimental work on the frog The frog fed with thymus gland was overgrown but underdeveloped, while the frog fed with thyroid gland was overdeveloped but undersized That point was brought out by Dr Timme in his example of four generations of one family in which there were two morons, some acromegalics some giants while some showed other gland changes I make no claim that endocrinologic factors are the cause of all feeblemindedness I simply call attention to the marked gland changes found in all cases of feeblemindedness I would be glad to find one definite glandular syndrome as the cause of one definite feeblemindedness There are many feeblemindednesses, such as syphilitic, glandular, traumatic, etc Dr Menninger and Dr Skoog emphasized the fact that in the past the nervous system has been studied separately from the rest of the body We have *not sufficiently considered* the body as related to the central nervous system As Dr Southard used to say we look at the neurons but the body is connected up not only by neurons but also by hormones, and these must be considered together

THE SURGICAL TREATMENT OF BRAIN ABSCESS*

A W ADSON, M D
ROCHESTER, MINN

A brain abscess may pass through three distinct phases, the initiatory, the quiescent, and the terminal[1] It should be operated on in the quiescent stage, not in the initiatory or terminal, as is frequently done

During the initiatory stage the patient is more likely to present symptoms of diffuse encephalitis and meningitis than of localized tissue destruction In many instances the disease passes into the quiescent stage with little trouble except for symptoms of intracranial pressure, which are difficult to distinguish from those produced by brain tumor, or it may be interrupted by death in a comparatively short time

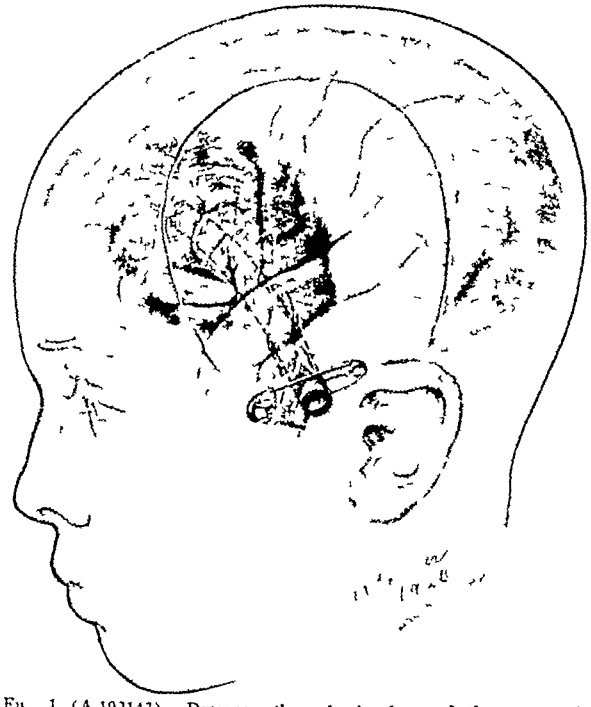


FIG 1 (A 192143).—Drainage through the base of the osteoplastic flap of a large subcortical abscess of the left frontal lobe containing 6 ounces of pus The abscess developed subsequent to an acute otitis media

During the quiescent stage, the abscess usually presents a thickened capsule and the inflammation occasionally quiets down permanently But if the lesion is not operated on, a secondary infection usually develops which stirs up the old process, produces acute encephalitis, and causes death

Holmes[2] found that brain abscess is more likely to occur during the second and third decades of life than during the first, and that solitary tubercles are more common than abscesses in children under 5 years of age

Gowers,[3] in a study of 223 cases of brain abscess, found that 10.7 per cent occurred in patients less than

From the Section of Neurologic Surgery, Mayo Clinic
* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Macewen W Pyogenic Infective Diseases of the Brain and Spinal Cord New York the Macmillan Company 1893 354 pp
2 Holmes J B Multiple Abscesses of the Brain in Infancy, Arch Int Med 17 591 606 (May) 1916
3 Gowers quoted by Holmes (Footnote 2)

nephritis The average white cell count for the entire group was 16,000, in a few instances the leukocytosis was normal Since the diagnosis was uncertain during

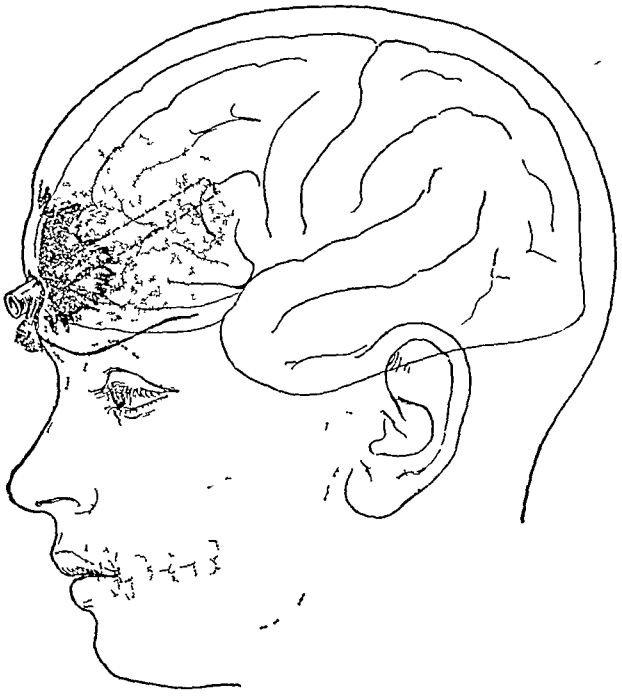


Fig 3 (A 206923) —Drainage of an abscess of the left frontal lobe through a skull defect caused by a kick from a horse The frontal bone was crushed and infected spicules of bone were driven into the brain substance

examination, except for the increased intracranial pressure, the spinal puncture was not done in all cases Whenever the abscess was not associated with diffuse encephalitis or meningitis, the cell count was normal

Fig 4 (A 206923) —Three months after operation (Fig 3) recovery was complete except for a cerebral hernia which has now receded

from two to five lymphocytes to each cubic millimeter In cases of meningitis with brain abscess, the spinal fluid was cloudy and contained as many as 108,000 leukocytes and lymphocytes to each cubic millimeter Spinal fluid and blood Wassermann tests were positive in two of the twenty-six cases, this is interesting in that neither of these two patients had any corroborative symptoms of syphilis Choked disks, ranging from 1 to 7 diopters, were present in nine cases One patient with a fifteen months' history of brain abscess following a frontal sinusitis had a secondary atrophy with total blindness Local tenderness was present in twelve cases, in four it was not over the abscess, but a confirmatory symptom in eight of this group Partial or complete paralysis was present in fourteen cases Fifteen of the twenty-six cases presented symptoms of mental disturbance, such as lack of attention and cooperation, loss of memory, delirium and coma

A resume of the findings reveals urinalysis usually negative, a slight leukocytosis, and if the abscess is unattended with meningitis or cortical encephalitis, a negative spinal puncture One third of the patients

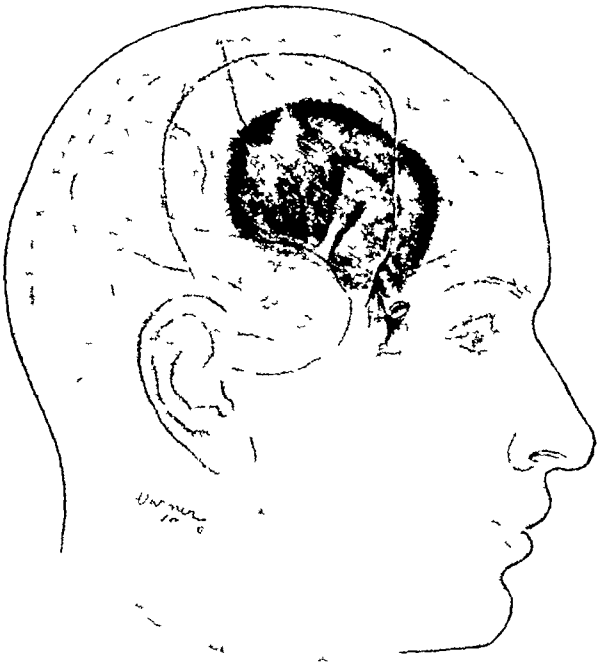


Fig 5 (A 270162) —Drainage of a subcortical abscess of the right frontal lobe through a small decompression at the angle of the wound The abscess, which developed subsequent to a frontal sinusitis was of fifteen months duration and contained sterile pus Patient recovered except for secondary atrophy

studied had choked disks, ranging from 1 to 7 diopters, one third had local tenderness over the abscess, and one half had a motor or mental impairment

The duration of the symptoms varied from three days to three years, and each case followed one of three distinct courses Sixteen patients had an average duration of symptoms of thirty-two days, four of these were operated on for brain abscess and promptly died The five who recovered following a drainage of the abscess had an average duration of symptoms of six months Five patients had an average duration of twenty-seven months, two slowly recovered, and three died, two developed secondary infection and encephalitis, and one received an injury which ruptured an old abscess into the ventricle

The sixteen patients were in the initiatory stage which did not pass into the quiescent stage Those who were operated on and recovered were treated in the quiescent stage when the immunity was the highest

The last five patients fall into the terminal group in which an occasional patient recovers without operation, but the chances are greater that a secondary infection and death will occur

REVIEW OF SURGICAL CASES

Six of the nine patients operated on were explored through an osteoplastic flap, two through a skull defect, the abscess being within close proximity to the site of the injury, and one through a subtemporal decompression, which was not located because of insufficient exposure

A brain cannula was used to locate the abscess, the pus and broken down brain material were removed by suction, the cavity irrigated with saline solution and then packed loosely about the tube drains with iodoform gauze, in one case, tubes without gauze were used In all but one case the pus was very thick and

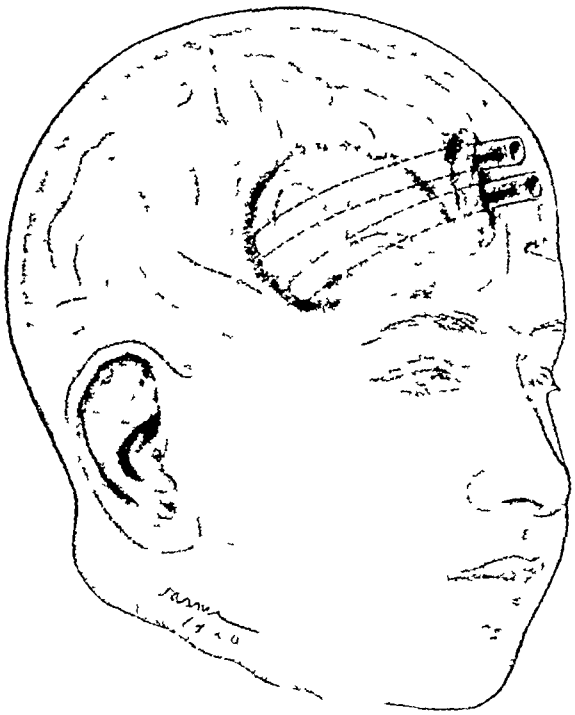


Fig 6 (A 112525)—Drainage of an abscess of the right frontal lobe through a skull defect which was the result of an osteomyelitis following frontal sinusitis

ropey and contained pathogenic organisms, in the one the pus was sterile, this patient gave a fifteen months' history of trouble

RESULTS IN TWENTY SIX CASES OF BRAIN ABSCESS

Patients		Patients	
Operated on (35 per cent. of 26)	9	Not operated on (65 per cent. of 26)	17
Died (45 per cent of 9)	4	Died (89 per cent. of 17)	15
Cured (33 3 per cent of 9)	3	Cured (5 8 per cent. of 17)	1
Improved (22 2 per cent of 9) (with epilepsy)	2	Improved (5 8 per cent of 17) (with epilepsy and slight motor impairment)	1

The convalescent course of the patients, save one, who recovered following the operation, was uneventful This patient developed a local meningitis, osteomyelitis, and infection in the wound, a considerable portion of the skin was destroyed exposing an area of the bone flap 6 by 9 cm This patient presented a very interesting and rather singular picture in that we were experiencing considerable difficulty in stimulating granulation

Fig 7 (A 112525)—Patient ten days after drainage of the frontal lobe abscess (Fig 6) with the drains in place

over the denuded area, when, accidentally, the patient bumped her head and fractured the outer table of the exposed bone, on removal of which the wound healed rapidly, and skin-grafting was unnecessary The principle of this healing is of value in the treatment of exposed areas of the skull in cases of gummatous osteitis, and in denuded areas following traumatic loss of scalp If the sequestrum or outer table is removed, the wound granulates quickly and usually heals without skin-grafting

Fig 8 (A 112525)—Patient had an uneventful convalescence

Another striking feature following drainage of a brain abscess is the rapidity and entirety of mental and motor restoration This may be explained by the fact

that the abscess usually develops within the white substance of the brain with a tendency to expand the part involved rather than produce actual destruction of brain substance, and on drainage of the abscess the cavity collapses, the edema subsides, the circulation improves, and the function returns

CONCLUSIONS

1 The four principal etiologic factors in the formation of abscess of the brain are otitic infection, frontal sinusitis, injury to the skull, and hematogenous infection Brain abscess is usually single, except when it is of hematogenous origin associated with a general pyemia, and then frequently it is multiple

2 A brain abscess in its course may pass through the initiatory, the quiescent, and the terminal phase The different phases can be determined more definitely from the history and duration of the complaint than from the physical findings

3 If the abscess has developed by contiguity, it should be explored through the area of infection, but if the abscess is remote from the source of infection, it should be explored and drained through an osteoplastic flap craniotomy

4 Surgical treatment is of little value in the initiatory or terminal stages, or in the presence of meningitis, but it is of great benefit during the quiescent stage If there is doubt as to the differential diagnosis of brain tumor and brain abscess in the quiescent stage, it is advisable to explore rather than to perform a decompression operation for intracranial pressure or to wait for terminal symptoms

Fig 1—Position of the foot to be gained before one may feel assured that sufficient correction has been obtained, also a simple and efficient method of maintaining correction by the use of adhesive strips

Sugar Consumption in Relation to Health—Any etiologic connection between the increase of sweet eating in this country and the large number of physical defects and functional disorders, a realization of which has come to us through a more thorough examination of schoolchildren and young men, can be only problematic, writes F Van Der Bogert (*Albany M Ann* June, 1920) We know only that these defects exist at a time when general errors in diet are exceedingly common and the natural inference is that some causal relationship exists As suggested by Leonard Williams, 'inasmuch as food is agreeable it is safe to assume that such dietetic errors as are habitually committed arise from excess rather than deficiency of its consumption" Sugar, as the most pleasant, must be considered the most dangerous Dietetic errors certainly have their effect in the production of gastro-intestinal disorders so prevalent in children, and many of the functional nervous disorders of childhood can be directly traced to toxemia of intestinal origin The most frequent dietetic errors in childhood are carbohydrate excesses and sweets are in great part the determining factor in carbohydrate excess

CORRECTION OF CONGENITAL CLUBFOOT IN INFANTS

ISADORE ZADEK, M D
NEW YORK

The most satisfactory age at which to begin treatment of congenital clubfoot (equinovarus) is at the age of 2 weeks This delay adds no material difficulty to the correction, and the treatment is well advanced when the child is old enough to walk, so that only proper supervision is necessary beyond this stage, in the majority of cases In the treatment of congenital clubfoot one should strive not only for correction of deformity, but also for obtaining a relatively normal amount of motion, which can be obtained only by considerable overcorrection of the deformity and maintenance of this attitude for many weeks One must remember that the term "clubfoot" conveys no adequate conception as to the difficulty or ease of correction Correction may be quite simple or extremely difficult, and one can judge of this when the foot is first examined — noting its pliability or resistance to correction As to shape, there are two distinct types the long foot of relatively normal size, and the short, thick, pudgy foot with broadening particularly in the fore part of the foot With the latter type, one always anticipates trouble There is one feature of clubfoot not usually appreciated, namely, that whereas in almost all clubfeet, if proper treatment is instituted early, the deformity may be completely overcome manually and a relatively normal amount of motion in the ankle preserved in the majority of cases These feet do not develop in size as normal feet do, even when their correction has been simple and done early This is evident in the unilateral clubfoot cases in which there is a normal member for comparison, there is lack of muscular development of the entire extremity —which is usually of no practical significance, however

The procedure for correction is to overcome the varus completely before attempting any correction of the equinus, because the normal relationship of the astragalus must be restored before beginning dorsal flexion

This stage of treatment is best conducted by the use of plaster of Paris, changing it at intervals of one or two weeks, a simple method of application being the following Small strips of cotton are placed between the toes and a flannel bandage applied over

this, beginning at the toes, making every turn in the direction of desired correction with this bandage as well as the plaster bandage The toes are first covered with a half dozen turns of the plaster bandage, then as much of the varus as desired is corrected, and the application is continued up to the top of the calf of the leg, with an assistant steadying the bent knee

Fig 2—Method of application of plaster of Paris for right foot Flannel bandage has been applied from toes to top of calf and half a dozen turns of plaster have been applied encircling toes and front of foot—front of foot held in left hand plaster being applied with right.

On the right side, the fore foot caught in the left hand between the thumb on the dorsum and the other fingers around the sole is held in the desired position and the plaster bandage applied with the right hand, on the left side the opposite hands are used, the bandage being applied with the left hand In some of these cases there is a tendency for the child to kick the plaster off, which may be avoided by applying an adhesive strip on each side of the leg and incorporating it in the plaster

After the equinus is overcome, the correction is best maintained by adhesive strips applied across the foot in the metatarsal region and then across the leg as a stirrup first encircling the fore foot It is a good plan to apply a couple of thicknesses of adhesive plaster underneath the strips at the base of the great toe to prevent the edge of the adhesive strips cutting into the skin

Correction should be continued until the dorsum of the foot is against the lower part of the leg, and this position maintained for from six to eight weeks, when it may be discontinued ordinarily When this full correction is obtained, deep wrinkles appear in the skin on the outer border of the foot, which will trouble the mother unless she has been forewarned These later disappear After the adhesive plaster is discontinued, the mother is instructed to put the foot through the full range of motion opposite the original deformity frequently in the course of the day For the average case no splint is necessary The hands of an intelligent parent are more efficient in preventing deformity when the patient is under proper supervision For special cases, retention splints may be necessary When the child begins to walk, it is usually desirable to raise the outer border of the shoe one-fourth inch

After adequate effort, one finds cases in which the equinus cannot be overcome manually after division of the Achilles tendon This is due to short posterior ligaments and not to shortened ligaments, as some believe For these cases it is necessary to cut the posterior ligaments, which may be done subcutaneously [1] We have done a considerable number of these with satisfactory results After sectioning the ligaments, the foot is encased in plaster of Paris in an attitude of calcaneovalgus, and we then treat the foot as though it had been corrected manually, the same after-treatment being essential

This technic has been almost entirely evolved through the efforts of Dr E L Barnett of this city, whom I wish to thank

CONCLUSIONS

1 Treatment of congenital clubfoot should be begun early

2 Treatment should be continued until the dorsum of the foot rests easily against the lower end of the leg, and this position maintained for about two months if there is no tendency to recurrence, as in the average case

3 In the usual run of cases no brace is indicated Too much reliance is placed in the use of clubfoot braces The conventional brace is only retentive and not corrective

4 Frequent daily manipulations, opposite the original deformity, are essential until the correction is assured

Fig 3—Method of application for the right foot Foot held in right hand plaster being applied with the left

5 Many so-called relapses in congenital clubfoot, treated early, are due not so much to the tendency for deformity to recur as to the lack of sufficient treatment

885 Park Avenue

1 Zadek Isadore and Barnett E L The Importance of the Ligaments of the Ankle in Correction of Congenital Clubfoot J A M A 69 1027 (Sept 29) 1917

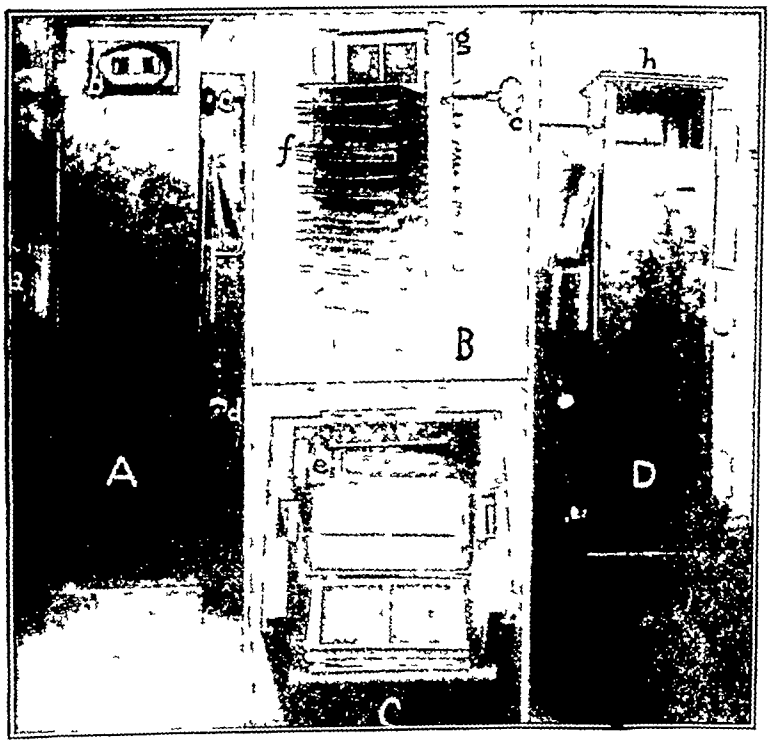
Clinical Notes, Suggestions, and New Instruments

STEREOSCOPIC CABINETS FOR DEMONSTRATION OF ANATOMIC AND PATHOLOGIC PREPARATIONS

ALEXANDER GIBSON, M A, M B CH B, F R C S (ENG), F R S E
WINNIPEG MAN

The value of stereoscopic pictures of anatomic preparations has been recognized for some years Waterston published, in 1906, the Edinburgh Stereoscopic Atlas of Anatomy, consisting of about 250 views Shortly afterward there was published a series of fifty views illustrative of the science of obstetrics Within the last few months there has been published in the United States a stereoscopic work consisting of views of operations as performed by well known exponents

Primarily to meet the needs of a large class of students of anatomy, the apparatus described herewith was designed The idea, however, is one which is capable of being applied indefinitely and individual teachers who may possess some special anatomic dissection, some unusual pathologic preparation or some point in operative technic which they regard as an advantage can easily make use of this apparatus There is nothing novel in the idea, except, I believe, its application to class teaching in the faculty of medicine



Stereoscopic cabinet *A* viewed from front, *B* framework showing views mounted on endless chain *C* lid removed to show lighting arrangements *D* viewed from rear to show portion removed for demonstration of transparencies *a* cards with description of views *b* face piece with stereoscopic lenses *c* handle for turning views *d* plug to fit any socket *e* electric bulb for illumination *f* cards each in a metal carrier, *g* wooden framework, *h* section removed

When an atlas consisting of a collection of photographs is placed in a class room there is always a strong probability that one or more cards will go amiss, they may be lost or be abstracted Further, it is impossible to be certain that the student will replace them in their logical sequence, and time may be wasted in rearranging them These disadvantages are overcome by the use of a demonstration cabinet

The views are mounted in sets of fifty on an endless chain The framework carrying this chain fits into a cabinet, in one face of which is fitted an adjustable face-piece carrying a pair of stereoscopic lenses The chain is turned by handles affixed to a shaft, which is square on section Within the cabinet, above the level of the top of the framework, there is a long, narrow, electric globe By means of reflected light the views are available for study independently of daylight

A modification of the cabinet can be made whereby stereoscopic transparencies can be demonstrated equally well A portion of the side of the cabinet, opposite to the face-piece, is removed, the lid is applied, and the transparencies are looked at by transmitted light

The apparatus was made for me locally Since its installation in the anatomy department of the University of Manitoba, it has been much appreciated by the students

661 Broadway

A SIMPLE DEVICE FOR MEASURING BASAL METABOLISM

PRELIMINARY REPORT *

HORRY M JONES, PH D, CHICAGO

The linear formula of Du Bois [1] has made possible very accurate measurement of the basal metabolism of human subjects by what is known as indirect respiration calorimetry

Specially constructed and equipped respiration chambers for measuring the direct heat output are not demanded for diagnostic purposes Briefly, all that is required is (1) measurement of the patient's rate of oxygen absorption per hour, (2) assumption of an average respiratory quotient of 0 82, so as to assign to the oxygen a definite caloric value per liter, (3) calculation of the subject's body area by the linear formula, and (4) from this data calculation of the patient's caloric output per hour per square meter of body area

Formerly, the only device available to clinicians taking advantage of these simple procedures was the apparatus described by Benedict [2] The features of the method as carried out by the Benedict apparatus, which obviously limit its wider usefulness, are noteworthy

1 Although usually known as the "Benedict portable" the fragility of the spirometer bell and necessity for water contained in the apparatus, to say nothing of its shape and weight limit its portability almost hopelessly, so far as carrying the test to the patient is concerned

2 Gas-volume changes from standard barometric to room-barometric pressures, and from 0 C to the various changes in temperature in the spirometer bell, occurring as the test proceeds form only a part of the corrections necessary to the calculations involved in the method Slide rule, logarithms and considerable time are virtually indispensable to the mathematics of the method before the results of the test are known, even after the operator has mastered a knowledge of the mathematical routine

3 An electrical connection for the motor used for circulating the enclosed air is absolutely essential for carrying out the test

The practical accuracy of the apparatus is unquestioned, however when the soda lime is absorbing properly and no leakage of the contained air occurs

The apparatus illustrated in Figure 1, which will be described in detail in a subsequent paper, was designed with the hope of extending the great clinical usefulness of basal metabolism measurements Its simplicity in operation, from the technical manipulations to the final calculations, is a feature which it is hoped will increase its usefulness Its portability however is its chief recommendation It can be

* From the Department of Pathology University of Illinois College of Medicine

1 Du Bois Delafield and Du Bois E F Clinical Calorimetry Fifth Paper The Measurement of the Surface Area of Man Arch Int Med 15 868 (May) 1915 Sawyer Margaret Stone R H and Du Bois E F Id Ninth Paper Further Measurements of the Surface Area of Adults and Children ibid 17 855 (June) 1916 Du Bois Delafield and Du Bois E F Id Ten Paper A Formula to Estimate the Approximate Surface Area if Height and Weight Be Known ibid 17 863 (June) 1916

2 Benedict F G Boston M & S J 178 667 678 (May 16) 1918

dismounted and put away in a carrying case slightly larger than a microscope case The case, the apparatus and the oxygen cylinder in all weigh 21 pounds The apparatus can be carried in any position, over rough roads, without fear of disturbing its parts or contents, and can be assembled or taken down in about one minute It requires no electrical or other special connection for operation The final result of the mathematics of the test is obtained directly, i e, without any calculation, from a table attached to the apparatus The measurement of the gas volume is independent of temperature and pressure

TABLE 1—TYPICAL READINGS ON SEVEN SUBJECTS *

Subject	Age	Sex†	Basal Rate in Calories per Square Meter per Hour
S T	25	♀	36 5
Wy	26	♀	37 0
J J T	32	♂	39 6
L P G	24	♂	39 2
F G	22	♀	37 5
M W	16	♀	41 0
S P	13	♂	44 0

* These results should be compared with the values given in the table by Aub and Du Bois
† In this column ♂ indicates male and ♀ female

TABLE 2—METABOLIC RATES OF EIGHT PATIENTS *

Patient	Age	Sex	Percentage Rise above Basal Rate. Per Cent
C C H	35	♂	+ 112
H P	47	♀	+ 87
P P	28	♀	+ 51
F C	28	♂	+ 35
W S	52	♀	+ 63
M W	16	♀	0 0
A H	44	♀	+ 26
M P	38	♀	+ 22

* The rates given are those of individuals suffering from hyperthyroidism of varying degrees of severity All of them had been diagnosed as such by Dr Charles S Williamson before being tested The results show the same ranges of variation reported by others in many cases of this disease

For limited space the great advantages of making triplicate readings, of shortening the time to three or four minute tests a discussion of certain trivial sources of error, etc, will be reserved for a later paper Already I have been criticized by clinicians for undue attention to small sources of error Certain it is that, at least for clinical purposes, consideration of ± 2 per cent total error is not of practical value[3]

For illustrative purposes, Table 1 shows typical readings on a few of the many normal subjects who have been tested by this apparatus

Table 2 is a record of the metabolic rates of eight subjects, five of whom had been diagnosed previously by Dr Williamson as frank cases of hyperthyroidism One of the other three, a young girl at the age of puberty, who had been suspected as a beginning case of hyperthyroidism proved to have a rate of 41, which is normal for girls at 16 years, according to the table of Aub and Du Bois From clinical manifestations the other two patients were borderline or suspected cases, a fact which is also well shown in their metabolic rates

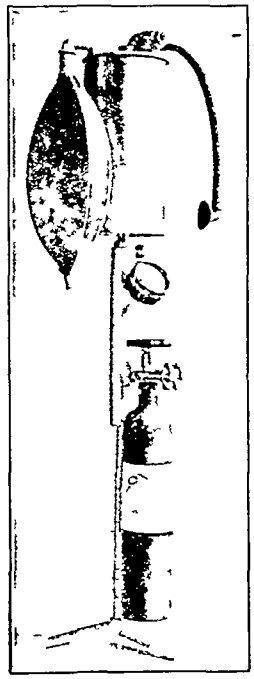


Fig 1 — Appearance of apparatus used for indirect respiration calorimetry height 37 inches weight including smallest size oxygen cylinder (40 gallons) 18 pounds carrying case 13 inches high weight about 21 pounds

A comparison of the results obtained by this device with those obtained by the Benedict apparatus when used on the same subject under the same conditions, showed a rate of oxygen absorption of 288 and 291 c c, respectively per minute In another test, with a second Benedict apparatus, in which the apparatus described here was operated by one unacquainted with this instrument but familiar with the Benedict apparatus, data were obtained which when calculated by another person present at the test gave rates of 45 0 and 44 1 calories per hour per square meter of body area, respectively on the same subject.

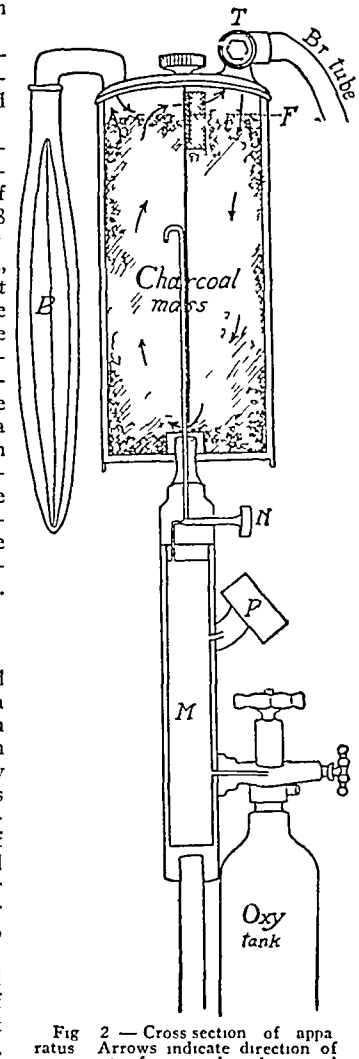


Fig 2 — Cross section of apparatus Arrows indicate direction of movement of inspired and expired air *Br tube* breathing tube *T* three way cock *F* flutter valve for directing circulation of gases *B*, rubber bag to contain measured amount of gas and to allow for expansions and contractions in respiration *N* needle valve for releasing the measured amount of oxygen from *M* the measuring cylinder into the charcoal alkali tower above *P* pressure gage with room temperature scale on dial to indicate when 1 liter of dry oxygen at 0 C and 760 mm has been released at any given room temperature from the oxygen tank

SUCCESSFUL USE OF APPARATUS

The apparatus described here has been used over a period of several months in clinical research and in diagnosis Its portability in a practical sense is demonstrated beyond question Several duplicates of it have also been distributed and are being used for diagnostic purposes, and for following, from time to time the effects of therapy by clinicians and general practitioners, a few of whom, during the last months of its development, have become familiar with the uses and technic of the test So far, no inherent inaccuracies or technical difficulties have been reported from these sources In fact, its technical variations as stated above have already been shown by independent and comparative tests to be well within the limits of individual and physiologic variations, and therefore adequate to the needs of the clinician as an instrument for measuring basal metabolism

UNUSUAL SYMPTOMS CAUSED BY CERUMEN IN AUDITORY MEATUS

REPORT OF CASE

JULIUS KAUNITZ M D NEW YORK

Because of unusual symptoms produced by such a trifle as cerumen in the auditory meatus I have thought it worth while to report this case

Mrs W aged 73 with unimportant family and personal history, suffered from nausea vomiting diarrhea vertigo and weakness of twelve hours duration July 17 1920 These symptoms the daughter ascribed to ptomain poisoning resulting from some food of doubtful merit ingested the day

3 The assumption of a respiratory quotient of 0 82 has abundant experimental justification and apparatus for the determination of the respiratory quotient in each individual case is wholly superfluous especially in diagnosis or in clinical research

before The diarrhea I suspected to be caused by a purgative taken on the previous evening

The patient was well nourished The thoracic and abdominal organs and extremities were apparently normal The patient was lying on her right side An attempt to turn the head to the left immediately brought on the most distressing giddiness, nausea and weakness The sitting or standing position could be maintained only with the greatest effort, and always with the head and body inclined to the right Her walking was of a staggering nature It was necessary to hold on to objects for support There was a distinct lateral nystagmus when looking to the left, but not when looking to the right The patient denied any recent ear trouble, deafness or any unusual sounds or sensations in the ears Examination of the ears, however, disclosed a thin disk of ear wax a quarter of an inch in front of the drum When this disk was punctured, there was an immediate relief from all the distressing symptoms The patient could now turn her head to the left, sit, stand or walk as usual The nystagmus had disappeared

Special Article

OBSERVATIONS ON SOUTH AMERICA

IV ARGENTINA

WILLIAM J MAYO, M D
ROCHESTER, MINN

Argentina is readily accessible from Chile by the Transandean railway The frontier is reached at a height of about 3 kilometers above sea level, at which point the railway tunnels its way through 4 kilometers of mountain range underneath the old pass The railroad follows the Rio Blanco River on the Chilean side by a very sharp ascent and many windings, often uncomfortably close to the edge of the narrow ledge on which it is built On the Argentine side the descent to the pampas or great alluvial plains which extend from the foot of the Andes approximately 800 miles to the sea is less abrupt, and follows the cañon of the Mendoza River

At least a third of the nine or ten million people of Argentina live in cities, more than a million and a half in Buenos Aires alone The country is very fertile, naturally without trees, but eucalyptus, Lombardy poplar and weeping willow trees have been planted freely in certain districts The land resembles that of the Dakotas, and is farmed in very large tracts or estancias The land owners have become enormously wealthy Blooded cattle may be seen in herds of many thousands Argentina, with its rich lands, situated largely in the temperate zone, will eventually become the United States of South America

The railroad system in Argentina is excellent, the equipment and management are on the continental plan Buenos Aires, which of late years has been controlled by the radical party, dominates the country politically Laws controlling the disposition of property on death, to break up the large estates, have been passed recently Strikes are initiated with or without reason, and industrial disturbances are constantly occurring Recurring longshoremen's strikes have seriously interfered with shipping for a long time, and grains, hides, wool, sugar, cotton and many other of the world necessities have accumulated in Argentina during this period Numerically the Italians are the dominant race The Spanish, English, French, German and American colonies are relatively small

Buenos Aires is a beautiful city, the Paris of South America Its gardens, parks, sidewalk cafes, boulevards, statues and ornate buildings give it a charm that is all its own There is a public lottery system in Argentina, and the profits are used for charities Horse racing is the national pastime, and in this sport Argentina leads the world The Jockey Club is controlled by the government, but is privately managed The betting is princely, thousands of dollars are lost and won each racing day Little attempt is made to control the liquor traffic

The general standing of education in Argentina is high The primary course is five or six years, depending on the ability of the student, and is compulsory Argentina has 400 schoolbuildings on the American plan, most of them modern and completely equipped, including lunch rooms, where bread and sterile milk are served the pupils without charge The second course is six years, but is not compulsory Modern languages are taught in this course, and the pupils are not considered "educated" until they have acquired at least three, at the present time Spanish, French and English One unique feature of the university system in Argentina is the method of control One third of the votes are in the hands of the full professors, one third in the hands of the junior professors and instructors, and the remainder with the students Strikes by the students are not infrequent, and all classes are suspended until a settlement is reached It is difficult to obtain an unprejudiced opinion of this innovation in Buenos Aires, but it may at least be said that it is popular with the students The day we visited La Plata University the medical students were on a strike Even in the primary schools, strikes are frequent A recent student strike of pupils under 10 had to be settled on bended knees, the parents furnishing the knees and the shingle

The chief medical school of Argentina is located at Buenos Aires and is a part of the university The building is a dignified structure and occupies two city blocks The school has an enrolment of 5,000 students The course is seven years, but is so rigid, particularly in theoretical branches that only about one fourth of the students graduate in this time Many spend eight, nine or even ten years obtaining their degrees Approximately two of the seven years, however, are spent on physics and chemistry, studies that are premedical in North America Public health, dentistry and veterinary medicine are under the direction of the medical school Premedical courses in anatomy, chemistry and the fundamental branches are also given at the La Plata University, about 40 kilometers from Buenos Aires The Department of Anatomy at La Plata, under the direction of Dr Pedro Belou, is unusually good I was much interested in some researches in human and comparative anatomy of the liver and gallbladder which he had under way The museum of

natural history of La Plata is said to be the finest in South America, and we spent a half day with the curator, the venerable Professor Quevedo, observing its wonders The anthropological collection is unique

Many of the thirty hospitals in Buenos Aires are old, but practically all are in a process of reconstruction along modern lines The hospitals have high ceilings, large window spacing, verandas and gardens, well suited to the tropics, but they are not screened Trained nurses, as we understand the term in the North, do not exist in South America There is only a small middle class from which to draw material for nurses, it is obviously impossible under present conditions to obtain students from the cultured class qualified for such work However, the general average of education is being raised, and new training schools are being established with American nurses in charge The records in all the hospitals are extraordinarily good Few hospitals in America can show records equally well kept

Almost all the hospitals and charities in Buenos Aires are financed by the Woman's Benevolent Association, which collects and dispenses funds The municipal authorities are said to be very jealous of this organization, but it is so strong, and the money is so well administered, that no real objection can be filed against it

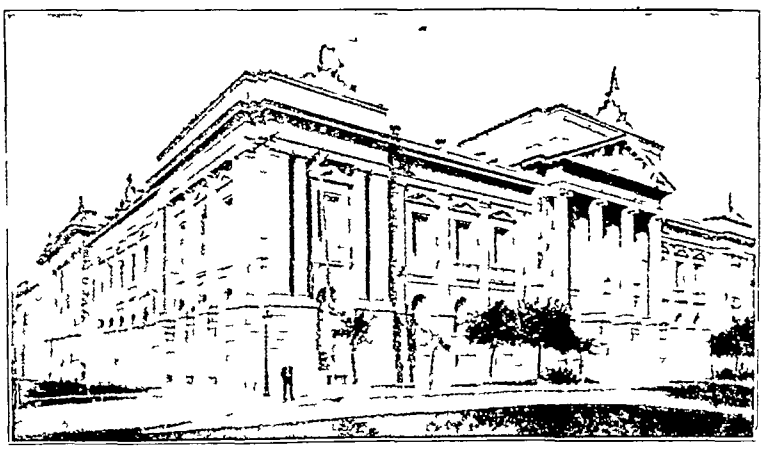
The Rivadavia Hospital occupies almost an entire block of land and is divided into medical, surgical, gynecologic and maternity departments In the museum of the latter are many rare and well preserved specimens, as well as a very complete and well selected teaching collection In the department for children is a fine infants' clinic

The new medical hospital is under the direction of Dr Agote Its organization and its records are models of excellence Clinical work and investigation of the most extensive and advanced character is being carried on Dr Agote was the originator of the citrate method of blood transfusion and has perfected the technic of the procedure A detailed description cannot be given of all the important features of this institution, but the American student of internal medicine who arranges to spend a year with Professor Agote will, indeed, be fortunate

The British Hospital in Buenos Aires has 200 beds Dr O'Connor, senior surgeon, well known in the United States by his frequent contributions to American surgical journals, and Dr Robert Hallahan, are the surgeons in charge Dr Hallahan, the junior surgeon, was educated in Ireland about twenty years ago After coming to Buenos Aires he passed the examination given in Spanish He is quite American in his methods Many Americans go to this hospital when they are ill

One of the most respected of Buenos Aires' notable surgeons is Herrera Vegas, a man of great wealth and philanthropy, and an inspiring influence for good in the medical profession Dr Vegas speaks four languages fluently He has contributed to literature several monographs on special surgical subjects, and in conjunction with the eminent surgeon, Dr Cranwell, is now preparing an important work on hydatid disease The chapter devoted to hydatids of the lung will be particularly interesting A large number of these cases were seen in the several hospitals Hydatid disease is very common in South America, and is thought of whenever a patient presents unusual symptoms When these cysts occupy the lungs, the fluid can be agitated by motion and the waves can be reproduced in moving pictures Dr Vegas has one of the finest private libraries in South America

Dr Pedro Chutro, one of the professors of surgery at the Medical School, is well known in the United States He served with the French during the Great War in charge of a large hospital in France, and it is generally conceded that his work was not excelled by that of any other surgeon At the close of the war he was requested to go to New York to demonstrate in the military hospital there his original methods of dealing with old infected compound fractures with osteomyelitis Professor Chutro was decorated by the United States with the Distinguished Service Medal, he is one of the few foreign surgeons to receive this honor Dr Pasman, one of the professors of surgery in the Medical School, is also well known in the States All the surgical work we saw in Buenos Aires was good, and carried out with characteristic skill and precision The surgeons of Argentina compare favorably with those of any other country in the world



School of Medicine Buenos Aires

Progress in Health Work.—Towns, cities and states are beginning to realize that the cheapest form of health insurance may be obtained from well organized and efficiently operated health departments The demand for trained public health workers has grown so rapidly that it now greatly exceeds the supply The call for public health nurses alone is so great that several years must elapse before enough women can be trained in the work to supply the communities now calling for the essential service which only a public health nurse can furnish—*Connecticut Health Bull* December 1919

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, AUGUST 21, 1920

ORGANIZED VS INDIVIDUAL EFFORT IN RESEARCH

In his presidential address delivered at the Cambridge meeting of the British Medical Association, Sir Clifford Allbutt [1] pointed out the complexity of disease and the great advantage that has accrued to research by approaching the problems from a comparative standpoint To proceed in this way, however, requires a breadth of intellect and a wealth of observation and analysis that are ordinarily beyond the possibilities of the individual Hence Sir Clifford argues for the organization of investigation on a larger scale commensurate with the needs of such a comparative survey, in which many intellectual forces may combine to work toward common ends At the present time, says Allbutt, "no one stirs, save to gyrate each in his own little circle There is no integration, no organization of research, no cross light from school to school, no mutual enlightenment among investigators, no big outlook" "Diseases," he continues, "are not 'entities,' nor even recurrent phases of independent events, but partial aspects of a universal series The young graduates we have, many of them of great capacity, but every day we are losing them because they are not taken up at once into scientific teams, so they slacken, or drift into some other means of livelihood, and things muddle on as before How blind we are!"

No one will gainsay the wisdom of much of this advice The organization of scientific effort, the team play of scientific workers, during the World War illustrates well what can be accomplished in speeding up the development of new ideas, if not their actual creation It is doubtless true that two heads are better than one But in our modern enthusiasm for organization we are in danger of forgetting that system and survey and encyclopedic knowledge can never supplant real thinking Thinking is, after all, an individual performance Companies or groups of persons do not think together or devise or invent anything or any process except so far as they put together—organize, compare—the products of individual human minds

This is, perhaps, an opportune moment to sound a note of warning lest we become blind to the limitations of organizing investigative effort It is likewise a favorable time for uttering a plea for the individual worker in science He must be encouraged, not merely permitted, to unfold his own personality—his own point of view and perhaps even his seeming eccentricities of mind He must be permitted, at all events, to preserve the open mind rather than to be biased by the projects of a company of scholars A league of investigators might promote lasting benefits to the world No one would expect it to make a scientific discovery Let us by all means facilitate the progress of science by furnishing the requisites for research by organized effort to promote the aims and set forth the results, by systematic planning and cooperation which will make established facts easily available and widely known Let us increase the number and variety of national or even international institutes if there is prospect of intellectual, social or economic gain thereby But amid this growth of the get-together spirit and better intellectual community let us always bear in mind the individual who does the thinking We need not be blind to the need of integration in science, we must not be forgetful of the man Genius is found in men, not in organizations

A PUBLIC HEALTH PROBLEM IN THE PHILIPPINES

In 1908, Garrison [1] thus summarized his experience in the study of alimentary conditions in our insular possessions

> The population of the Philippines presents a higher percentage of infection with intestinal worms than has ever been definitely reported from any other people and the condition is essentially a chronic one the results of which manifest themselves indirectly in the general physical impoverishment of the people and the high rate of morbidity and mortality accredited to other diseases

This statement was highly significant from the standpoint of public health, even more surprising, however, was the finding [2] of intestinal parasitism in virtually all of a large number of children whose feces were carefully examined It is, of course, recognized quite generally that infestation with some parasites, such as pinworms (oxyuriasis) and eelworms (ascariasis), is likely to be more common among children than among adults, but these Philippine records for the young were almost overwhelming in their import and raised many serious questions

A decade later finds the conditions just referred to essentially unaltered In a report from the Bureau of Science at Manilla, Haughwout and Horrilleno [3] register as the outcome of an examination of 100 sick

1 Allbutt T C Universities in Medical Research and Practice Brit M J 2 1 (July 3) 1920

1 Garrison P E. Philippine J Sc. B 3 73 1908
2 Garrison P E and Llamas R The Intestinal Worms of 385 Filipino Women and Children in Manila Philippine J Sc B 4 185 1909
3 Haughwout F G and Horrilleno F S The Intestinal Animal Parasites Found in One Hundred Sick Filipino Children Philippine J Sc 16 1 (Jan) 1920

children in the Philippine General Hospital that ninety-two were parasitized The earliest case of parasitism was encountered in a child of 7 months, under 1 year of age the incidence was 67 per cent , all children between the ages of 2 and 13 years were found to be parasitized The organisms recorded lie in thirteen genera and as many species The whipworm (*Trichuris trichiura*) was the most prevalent parasite, followed closely in frequency by *Spirochaeta eurygrata* and the eelworm (*Ascaris lumbricoides*) No evidence of cestode or trematode infection was discovered No protozoon of proved pathogenicity, like *Endameba histolytica,* was encountered, thus suggesting a possible immunity in children Multiple parasitism was quite common The observed combination of pinworm and eelworm cannot fail to be objectionable, because the entire alimentary tract becomes involved thereby

It must be frankly admitted that aside from infestation with notably pathogenic intestinal parasites like the hookworm, no definite pathologic symptoms are at present referable to the presence of the other species Is this widespread parasitism then to be regarded as without import for childhood and growth? Does the ignorance of definable harm justify an attitude of indifference on the part of pediatricians? It may be well in this connection to review the possibilities of detriment that might be ascribed to the supposedly innocuous invaders They may, to quote the Manila protozoologists, produce substances directly toxic, cytolytic or hemolytic, their products of metabolism may be harmful, when present in large numbers, parasites may injure mechanically the mucous lining of the alimentary tract, they may aid in the transport of pathogenic organisms, they may interfere seriously with the absorption of digestive products by their actual adherence, as in the case of *Giardia,* to the epithelial surfaces, and the parasites may occasion an actual invasion and destruction of the tissues with all the sequels

This is, indeed, a formidable array of objectionable possibilities, even when the indictments are not yet proved for the individual cases It would surely seem as if a serious problem were offered to practical pediatrics by the findings among the Filipino children One cannot dismiss the suspicion that intestinal parasitism directly or indirectly contributes heavily toward the high death rate among them The parasitism starts coincidently with artificial feeding, but even breast-fed children are not exempt in all cases Children are everywhere notably indifferent to sanitary laws, and when to this indifference is added the existence of a highly insanitary environment, the problem of prophylaxis becomes almost insuperable There is no treatment of proved efficacy against the whipworm, *Trichuris,* and the eggs of this organism remain viable for years Hence we can understand Haughwout's note of despair when he writes "One can picture the extent of the 'clean-up' process that would be required to purge a community of *Trichuris* alone, a job that would make the hookworm campaign seem like child s play in some respects" But preventive medicine has become accustomed in these days to tackle big jobs

THE RÔLE OF DIET AND EXERCISE IN ANTISYPHILITIC TREATMENT

Carefully conducted observations on syphilitic patients have indicated that considerations of diet and exercise may deserve greater attention than is customarily regarded as requisite for the uncomplicated success of antisyphilitic treatment The occasional appearance of more or less grave signs of intoxication after administration of preparations of arsenic and mercury or both is familiar to all who deal extensively with syphilitic patients Sometimes the symptoms even resemble those of acute yellow atrophy of the liver, while jaundice is of common occurrence Bailey and MacKay,[1] working in the Ontario Military Hospital, Orpington, Kent, have discovered that in patients whose livers are damaged by arsphenamin derivatives, an increase of cholesterol in the blood is an early and marked sign, it persists after other clinical signs have disappeared As hypercholesteremia was found in nearly all of the toxic cases, they suggest, therefore, that routine estimation of blood cholesterol may furnish a valuable sign of a precarious state of the liver in persons under antisyphilitic treatment

With respect to the values for the urea content of the blood, it appears that although some patients furnished normal figures, in the majority they were above normal According to the Canadian investigators this was due to the high nitrogenous diet, including 150 gm of protein a day, and to insufficient physical restrictions placed on the soldiers under observation The blood figures were usually more favorable when rest was rigorously enforced

It is known that diet plays a part in the ease of recovery from the effects of delayed poisoning by various drugs, including phosphorus and chloroform, which have been investigated extensively under experimental conditions For example, Davis and Whipple,[2] who have studied liver damage and repair in dogs poisoned by chloroform, noted that sugar and diets rich in carbohydrates, fed in the days preceding chloroform anesthesia, exert a marked protective action against liver injury Fats alone, or combinations of food containing fat in large proportion, induce a maximal susceptibility to liver injury Skim milk alone is highly protective A diet of bread and skim milk or any rich carbohydrate diet gives the optimal liver repair A diet of cooked skeletal muscle is not favorable for rapid liver repair

1 Bailey C V., and MacKay Argus Toxic Jaundice in Patients Under Antisyphilitic Treatment Arch Int Med 25 628 (June) 1920

2 Davis N C and Whipple G H The Influence of Fasting and Various Diets on the Liver Injury Effected by Chloroform Anesthesia Arch Int Med 23 612 (May) 1919

If the possibility of damage comparable with "delayed poisoning" in chloroform anesthesia occurs in medication with arsphenamin and related products, we agree with Bailey and MacKay that it would seem advisable in the treatment of syphilis to institute a rich carbohydrate diet low in fat and protein This diet should precede the treatment by several days and should be continued throughout its full course The effects of increase of protein in the diet and of exercise might be controlled by the estimation of urea in the blood At any rate, the consideration of diet in this chapter of medicine constitutes a therapeutic novelty

THE NATURE OF THE FAT-SOLUBLE VITAMIN

The discovery of the dietary importance of that property of many foods which is now termed fat-soluble vitamin or fat-soluble A represents a contribution of American physiologists [1] to the science of nutrition It has been repeatedly verified both in this country and abroad According to the observations made on a variety of experimental animals, the lack of the fat-soluble vitamin in the diet during adolescence may lead to an inhibition of growth together with symptoms of decline in health Most conspicuous in a specific way is the apparently increased susceptibility to bacterial infection In the case of rats this lowered resistance first betrays itself in many instances by the appearance of a characteristic disorder of the external eye which has provisionally been classed as a xerophthalmia It usually begins with a swelling of the lids which is followed by an inflamed and catarrhal condition of the conjunctivae This rapidly becomes worse, and the discharge, which is at first hemorrhagic, frequently becomes purulent If untreated, the cornea may become involved and total blindness result If a food containing fat-soluble vitamin is administered, the symptoms usually clear up in a few days without further treatment, and growth is resumed The same phenomena have been observed in mice, and more recently in rabbits kept on diets poor in the fat-soluble vitamin [2] A possible relation of the lack of the latter to the occurrence of phosphatic calculi has also been pointed out by Osborne and Mendel [3]

Whether and in what manner a dietary deficiency in fat-soluble vitamin plays a part in human disease remains to be ascertained The probability of the need of this food accessory in the ration of man is large and the possible dire effects of a lack of it are being discussed widely at present, notably in relation to the pathogenesis of pellagra, rickets and xerophthalmia in childhood The fact that many fats, such as lard, vegetable oils and hydrogenated fats, which have found widespread use in the dietary of man in recent years, are virtually devoid of fat-soluble vitamin has caused some concern owing to the relatively high cost of those fats, like milk fat and egg fat, which are rich in it It is a relief to know, however, that the fat-soluble vitamin has a far wider distribution in nature than the earlier studies led physiologists to suspect Only recently the researches of McCollum, Steenbock and their collaborators at the University of Wisconsin,[4] and of Osborne and Mendel [5] in New Haven, have indicated the richness of many sorts of plant tissues in all familiar types of vitamins, thus placing the dietary importance of "vegetables" in a new light

In commenting on this information, Osborne and Mendel remark that it emphasizes the use of vegetables to supplement the refined foods of the modern food industry which furnishes products rich in proteins, fats and carbohydrates, but in many cases comparatively deficient in the vitamins The newly acquired facts, they add, serve as a further reminder that the fat-soluble vitamin need not be sought solely in foods known to be rich in fats Fat-soluble vitamin has never been isolated, nor has it been concentrated in any way which avoids the simultaneous presence of ordinary fats, to some extent at least Although its reactions and behavior toward solvents suggest a lipoidal character, Steenbock and Boutwell [6] have demonstrated that the fat-soluble vitamin resists saponification with alkalis whereby true fats are converted into soaps Hence it can scarcely be regarded as identical with fats This fact, for which some evidence had already been available, represents a distinct step in advance in the study of vitamins

The extracts containing fat-soluble vitamin as obtained from natural products are invariably colored Yellow corn is richer in fat-soluble vitamin than is white corn, there is a similar contrast between colorless lard and the yellow milk fat and egg fat Hence Steenbock has advanced the theory that the vitamin may be a yellow pigment or at any rate a closely associated substance His latest contribution is corroboratory, it also indicates that the vitamin attends the carotin rather than the xanthophyll variety of pigments, either or both of which may represent the yellow col-

1 McCollum, E V, and Davis M J Biol Chem 15 167 1913 Osborne T B and Mendel L B Ibid p 311

2 Nelson V E and Lamb A P The Effect of Vitamine Deficiency on Various Species of Animals I The Production of Xerophthalmia in the Rabbit Am J Physiol 51 530 (April) 1920

3 Osborne T B and Mendel L B The Incidence of Phosphatic Urinary Calculi in Rats Fed on Experimental Rations J A M A 69 32 (July 7) 1917

4 Steenbock H and Gross E G Fat Soluble Vitamine II The Fat Soluble Content of Roots Together with Some Observations on Their Water Soluble Vitamine Content J Biol Chem 40 501 (Dec) 1919 IV The Fat Soluble Vitamine Content of Green Plant Tissues Together with Some Observations on Their Water Soluble Vitamine Content ibid 41 149 (Feb) 1920 McCollum E V Newer Knowledge of Nutrition New York 1919

5 Osborne T B and Mendel L B The Vitamines in Green Foods J Biol Chem 37 187 (Jan) 1919 Nutritive Factors in Plant Tissues IV Fat Soluble Vitamine, ibid 41 549 (April) 1920

6 Steenbock H and Boutwell P W Fat Soluble Vitamine VI The Extractability of the Fat Soluble Vitamine from Carrots Alfalfa and Yellow Corn by Fat Solvents J Biol Chem 42 131 (May) 1920

7 Steenbock H White Corn vs Yellow Corn and a Probable Relation Between the Fat Soluble Vitamine and Yellow Plant Pigments Science 50 352 (Oct 10) 1919

oring matter in animal and plant foods These findings, if they are further substantiated, mark a distinct step in advance toward the goal of discovering the nature of the fat-soluble vitamin

Current Comment

PIE AND DIGESTION

There is a widely current slang expression which bewails the depressing circumstance that "somebody is always taking the joy out of life" Many Americans have become wedded early to an outspoken liking for pie, that typical national pastry The predilection for this article of diet seems to grow with the years Sooner or later, however, the aforesaid somebody, who is more than likely to be a member of the medical profession is certain to issue a note of warning against the alimentary dangers that lurk in pie Cake, the distant pastry relative, is somewhat less likely to form the subject of objections from the physiologic critic, while puddings usually belong to the immunes, or at least receive tolerant consideration The proof of the pudding—and why not also of the pie—is the eating Accordingly, a number of gastro-enterologists [1] at the Jefferson Medical College, Philadelphia, have come to the defense of pie by actually determining the gastric response to it and analogous foods in the healthy human stomach Direct comparisons of a variety of pies, cakes and puddings representative of American culinary art, on the same persons, indicated that pies "were handled more readily than cakes, and puddings somewhat more readily than either" For those who can think best in terms of statistics, it may be stated that the average gastric evacuation time of puddings was two hours and eighteen minutes, against two hours and twenty-seven minutes for pies, whereas cakes followed in the wake with an average record of three hours and two minutes Averaging the highest total acidities, values were obtained for puddings of 92, for pies of 90, and for cakes of 90 Some of these values are not widely divergent from the classic data obtained on Alexis St Martin, whose stomach permitted Beaumont to make his pioneer investigations in gastric digestion There is no occasion to report here the insignificant distinctions between custard pie and lemon meringue, for example, in their gastric behavior, but it must be admitted that mince pie, so often regarded as an arch offender of the digestive tract, requires a rather long time (from two and three quarters to three and one quarter hours) to leave the stomach The addition of ice cream to a piece of pie—a unique American combination—does not increase the burden of the stomach to any extent, and the conventional apple pie and cheese likewise give a conservatively good report To a few persons it may be a consolation to know that angel's food cake remained distinctly longer in the stomach than did devil's food cake Of course, gastric evacuation is not the sole, complete test of the dietary worth of a food

1 Miller R J Fowler H L Bergeim O Rehfus M E and Hawk P B The Gastric Response to Foods VII Response of the Human Stomach to Pies Cakes and Puddings Am J Physiol 52 248 (June) 1920

VALUE OF THE SCHICK TEST IN RELATION TO DIPHTHERIA

The importance of the Schick test as an index of antitoxin immunity to diphtheria ought to be familiar to physicians However, the recrudescence of Fourth of July casualties, to which attention was recently called in THE JOURNAL,[1] teaches clearly that it is human to forget easily Therefore the significant lessons of modern preventive medicine need and deserve to be reiterated again and again so long as they are likely to lead to public benefit The Schick test, which can be applied with great ease to large numbers of persons, makes it possible to differentiate those immune from those susceptible to diphtheria, and it also facilitates the attempt to increase the number of the immune by suitable prophylactic toxin-antitoxin injections The testimony as to the value of the test is already fully convincing Blum [2] recently demonstrated what can be accomplished in a large home for infants where diphtheria had been endemic as late as 1915 When it was ascertained by the Schick test that 37 per cent of the inmates were susceptible to the disease, attempts were made to establish an immunity in this group How successfully this was accomplished, through injection of those susceptible, is shown by the result that the same institution has been rendered diphtheria free during the last five years The outcome with more than a thousand children shows, furthermore, that a negative Schick test is evidence of the presence of sufficient antitoxin in the body to protect the individual against infection with diphtheria Changes in the Schick reaction from negative to positive during the first three years of life owing to the loss of inherited immunity, were found by Blum to be sufficiently numerous to justify retesting, at least in large institutions, during this period at intervals of a few months The duration of the active immunity conferred at different ages on persons susceptible to diphtheria, by injection of toxin-antitoxin mixtures, remains to be ascertained with greater precision In young children the duration presumably lasts far longer than two years The lesson is obvious

THE PHYSICIAN'S OFFICE

The people have money and they are spending it But, like the woman who bought the pair of silk stockings, they want something to show for it With incomes anywhere from $8 to $15 a day, the bricklayer who buys a flivver, the cap maker who has a fur coat, the tailor with season tickets for the opera, are able to pay good fees to their physicians But they want the best, and the physician should equip himself to give it to them The physician who plods along in shabby quarters, dependent wholly on his five unaided senses for diagnostic ability, his only reference works some dilapidated textbooks of a previous decade will not suit the taste of the new type of wage earner

1 This Year's Fourth of July Celebration editorial J A M A 75 181 (July 17) 1920

2 Blum Julius Active Immunization Again Did the Age in a Large Child Caring Institution Am J Dis Child 20 2 (July) 1920

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION, PUBLIC HEALTH ETC)

ALABAMA

Fire Destroys Sanatorium.—White's Sanatorium Enterprise, has been destroyed by fire at a loss of $30,000

Memorial Cornerstone Laid—The cornerstone has been laid for the Soldiers' Memorial Hospital, which is being erected in Montgomery, and will cost about $100 000

New Quarantine Plant Needed—The Surgeon-General of the U S Public Health Service appreciating the need for a new quarantine station at Mobile, has recommended that an appropriation of $400,000 be made for this purpose

Convict Camp Abandoned—Abandonment of the Mobile County Convict Camp, Mobile, which has been stigmatized as a 'health menace,' by the state prison inspector, was ordered by the board of revenue and road comissioners, August 2

GEORGIA

Medical Examiners Needed—The Federal Board for Vocational Education, Atlanta, announces that it desires to employ a number of physicians as field examiners for disabled exservice men for three months or longer, at a salary of $220 a month and necessary expenses when traveling in the field Application should be made to Dr Clarence S Merriam, District Medical Officer 814 Forsythe Building, Atlanta

Dr Long to Be Honored—The memory of Dr Crawford W Long, Athens is to be commemorated at the University of Georgia by a bronze medallion to be placed in one of the university buildings through the generosity of Joseph Jacobs Atlanta The board of trustees has accepted the offer and has appointed a committee to arrange for the presentation ——An appropriation for a statue of Dr Long in the Capitol Building, Washington D C will be asked of the state legislature by the Medical Association of Georgia Dr Garnett W Quillian Atlanta, is chairman of the committee appointed for this purpose

Personal—Dr Harry Moses Macon while performing an operation at a hospital was stricken with appendicitis and underwent operation at the Macon Hospital, July 24——Dr Robert A Herring, Milledgeville, has been made health officer of Wilmington N C, and entered on his new duties July 20 ——Dr Richard L DeSaussure Atlanta, commissioner of health of Floyd County, has resigned to accept a similar position at Brunswick Glynn County——Dr R W Todd Brunswick has resigned as commissioner of health of Glynn County to accept a similar position in Marietta Cobb County ——Dr Hollis F Hope Lafayette, has resigned as commissioner of health of Walker County and Dr Joseph H Johnson Millan has been elected in his place

District Society Meetings—The annual meeting of the Seventh District Medical Society met in Dalton as the guest of Whitfield County Medical Society July 8 It was unanimously decided to appoint a committee to raise funds for a suitable memorial to Dr Robert B Battey Rome Rome was selected as the next place of meeting and the committee named to select the Battey memorial was directed to erect it between this time and the date of the meeting of the state medical association which convenes in Rome next summer Dr Howard E Felton Cartersville was elected president, Dr Charles F McLain, Calhoun, vice president and Dr Mather M McCord, Rome secretary-treasurer——The midsummer meeting of the First District Medical Society was held at Savannah July 15 and the following officers were elected president Dr Charles Usher Savannah, vice presidents Drs J O Strickland Pembroke, and James O Baker, Savannah and secretary-treasurer, Dr B M Bishop Savannah

ILLINOIS

Field Day—A field day is to be given to all members of the Chicago Medical Society and their families by the North Side Branch of the society on the grounds of the St Marys Training School near Desplaines Wednesday, September 15

Negro Physicians Purchase Hospital.—An association of colored physicians of Chicago of which Dr Benjamin R Bluitt is president and Dr Fred C Cade secretary, has purchased the Fort Dearborn Hospital and Training School for Nurses at 3831-3835 Vernon Avenue

Hospital Projects Unite—Urbana has abandoned its hospital project and by a vote of the board of directors will join hands with the board of directors of the Julia F Burnham Hospital Champaign, in making a success of the forthcoming drive for $175 000 to remodel the present building and erect the first unit of a new hospital

Hospital Buildings Chartered—The secretary of state has granted charters to St Elizabeth's Hospital, Belleville, St Francis' Hospital Litchfield, St Clara's Hospital, Lincoln St Joseph's Hospital Highland, and St Anthony's Hospital, Highland These hospitals are conducted by the Sisters of St Francis and are affiliated with St John's Hospital, Springfield, and a number of others in Illinois and adjoining states

Organization Plans—The organization committee of the Chicago Medical Society has asked the presidents of the various branches of the society to call a preliminary meeting this month to consider the following matters important pending legislation unusual action of osteopaths, chiropractors naprapaths Christian scientists and other pseudo-health cults dangers of socialized medicine to the public as well as the profession, and changed economic standards and the inadequacy of medical incomes

Hospital Committee Meets—The committee on medical education and hospitals of the Illinois Medical Society and representatives of the Illinois Hospital Association and of medical colleges met at the Sherman Hotel Chicago, on Friday August 13 to discuss the eligibility of hospitals for the training of interns It was determined that hospitals should have at least twenty-five beds, organized staffs complete histories and records, laboratories for routine clinical, microscopic pathologic and bacteriologic work, complete roentgen-ray departments, expert instruction in anesthesia, instruction in obstetrics, and definite rules in regard to the duties and privileges of interns

IOWA

Gives Library to State—Dr Albert A Anderson Des Moines has presented his medical library of 300 volumes to the state library in the Historical Building Des Moines

Typhoid Fever in Pella—On July 14 forty-three cases of typhoid fever were reported in Pella and D S Griswold the state epidemiologist has been sent to Pella to investigate and to take charge of the situation The source of infection has been traced to an infected well which was in general use

Personal—Dr Robert E Jameson Davenport who has been seriously ill in Marcy Hospital is reported to be improving——Dr Frederick L Appel Muscatine who has been seriously ill is reported to be convalescent——Dr Oliver G Winters, Des Moines, has been appointed chief medical director for the Yeomen of America succeeding Dr Charles F Smith Des Moines

LOUISIANA

Permit Revoked—The permit of Dr Anthony J Monty New Orleans to sell drugs is said to have been revoked recently

Appropriations Increased—The appropriation for the state board of health for relief and emergency work has been increased by the legislature from $60 000 to $75 000

To Aid Drug Addicts—The Louisiana State Board of Health has decided to arrange for a special section of the Charity Hospital of New Orleans to be devoted exclusively to the treatment of drug addicts

MICHIGAN

Dean Resigns—Dr Wilbert B Hinsdale Ann Arbor for quarter of a century dean of the Homeopathic School of the University of Michigan has resigned

Dr Case Honored—The July issue of the *Welfare Bulletin*, published by the Battle Creek Sanitarium Welfare League is devoted almost entirely to the war story of Dr James T Case interestingly told and profusely illustrated

State to Take Over Tuberculosis Clinics—Arrangements have been completed whereby the state department of health will take over the free tuberculosis clinics and the tuberculosis work among former service men hitherto conducted by the state antituberculosis association

Smallpox.—On July 17 it was reported by the Detroit Department of Health that smallpox was five times as prev-

alent as is customary at this season Since April 28 the vaccination squads have examined 34 900 people and vaccinated 6,930 About 20 per cent of the individuals examined were considered to be unprotected against smallpox

Health Budget—The budget of the Detroit Department of Health for 1920-1921 allows $1 020 570 for the maintenance of the department, or $1 03 per capita as compared with 95 cents in the previous years' budget Expenditures of $25 000 for plans for a new city general hospital, and of $1 579 800 for the construction of a 300-bed tuberculosis sanatorium have also been allowed during the last biennium

Combating Typhoid—The state health department has purchased a motor truck, equipped as a laboratory, and is touring the summer resorts of the state testing water, milk and sewage at each resort visited A bacteriologist and sanitary engineer accompany the truck and Dr C C Young director of laboratories of the department, is giving several special lectures to summer school students and others The first appearance of the truck was at Adrian, July 19

MINNESOTA

Alterations at City and County Hospital—Plans have been prepared and bids solicited for extensive alterations and repairs at the Minneapolis City and County Hospital

Village to Issue Bonds for a Hospital—It has been decided that the village of Taylor's Falls will issue bonds to the amount of $10 000 to establish and maintain a hospital

Typhoid Prevalence in St Paul—The incidence of typhoid in St Paul is now believed to have reached its apex, as no new cases or deaths have been reported during the last week None of the data on the thirty-two cases which have been reported has given any clue to the source of infection It is believed, however to be a typhoid carrier

Work of Venereal Disease Division—The division of venereal diseases of the Minnesota State Board of Health, coordinated with the U S Public Health Service made a total of 3 043 Wassermann examinations between April 1 and June 30 of which 398 proved positive 2 368 negative and 277 doubtful In addition to this seventy-six unsatisfactory tests were made making a grand total of 3 119, with a positive percentage of 12 6 per cent During the same period 606 smears were examined for gonococci with a positive percentage of 39 9 per cent

Dr Mayo Honored in London—A dinner was given July 26 by the president vice president and governors of the American Hospital in London to Dr Charles H Mayo Rochester The Earl of Reading presided Sir William Arbuthnot Lane spoke of the great advantages which would accrue to medical science through the opening of the hospital, Rt Hon Arthur J Balfour expressed the hope that the hospital would prove beneficial to American medical students visiting England and Dr Mayo and Ambassador Davis paid tribute to Major-Gen William C Gorgas——Dr Mayo has returned from his trip to Europe where he attended the meeting of the British Medical Association at Cambridge and of the International Surgical Society in Paris He reports "a most surprising recovery from war conditions' and states that there is apparently "no setback nor depression—in fact, but little to show that they had a war"

NEW JERSEY

Child Hygiene Bureau Stations Opened—The Bureau of Child Hygiene of the New Jersey State Department of Health has opened two stations one at Lambertville and one at Frenchtown the latter to be the center of work which will include Milford and Stockholm A social worker has been appointed to work under the direction of Camden Board of Health Her salary will be paid by the Child Hygiene Bureau which will also suggest her policies The Child Hygiene Bureau has taken the initiative in securing cheaper or free ice for families who could not afford to have it otherwise

Physiatric Institute Opened—An institution known as the Physiatric Institute devoted to diabetes nephritis vascular hypertension and other metabolic disorders has been established at Morristown The site is the former estate of Otto H Kahn, comprising some 200 acres Dr Frederick M Allen is the director The backers are a group of prominent New York and Philadelphia men and financial support is sought chiefly from the individuals and families afflicted with these diseases The organization is in three divisions One is a sanatorium for the treatment of paying patients the income from which helps to support the other two divisions The second is a charitable branch which offers treatment to poor patients at reduced rates or free as far as the available funds can provide The third is a research division aiming to advance the knowledge and treatment of the conditions by all the facilities for clinical and laboratory study which a specialized institution of this kind can offer

NEW YORK

New Reportable Diseases—Botulism and lethargic encephalitis have been added to the list of reportable communicable diseases by recent action of the Public Health Council

Rockefeller Provides Hospital for Women's Reformatory—John D Rockefeller Jr has agreed to turn over at a nominal rental of $1 a year his social laboratory and bureau as a psychopathic hospital for the State Reformatory for Women Bedford He will first make repairs costing $1 000 These buildings will be occupied at once Dr Menas S Gregory announces that several psychiatrists will be added to the staff to classify the prisoners and determine their degree of mental responsibility

Institution for Mental Convalescents—A meeting of the directors of the Home and Farm Institution for Mental Convalescents recently held a meeting in New York City at which plans were made for a campaign for a membership of 50 000 At the same time an intensive campaign will be conducted to raise $1 000 000 for the purpose of constructing a large building in the Catskill Mountains where the poor who are nearing or have reached the borderline of insanity will be treated in an effort to restore them to mental vigor

Insane Aliens Sent Home—During the last year 290 insane aliens have been sent from New York institutions to the countries from which they came Of this number 147 were deported by the immigration authorities and 143 at the instance of the medical examiner of the state hospital commission According to a report to be issued later 48 per cent of the insane in this state or about 17 000, are foreign born and both parents of 66 per cent of the state's insane are of foreign birth Of the 17 000 foreign born insane in state institutions all except 500 are not deportable, having been in this country longer than the five-year limit required for deportation proceedings

Graduate Bulletin on Orthopedic Surgery—Bulletin No 3 of the New York Association for Medical Education deals with orthopedic surgery The student should be a graduate of a high grade medical school and should have completed a year's internship on the surgical side of a general hospital The course preparing him for practice as an orthopedic surgeon would consist of from six to twelve weeks of work in applied anatomy and review courses in the fundamental medical sciences such as embryology pathology and bacteriology This work should be followed by an internship of a year or more in some hospital having a large orthopedic service or the student should associate himself with a surgeon practicing this specialty The *Bulletin* lists the places in New York City where special training in orthopedics may be obtained

New York City

Smallpox Brought from Jamaica—Forty-three passengers on the British steamship *Princess May* which arrived recently from Port Antonio, Jamaica were sent to Hoffman Island for observation following the discovery of a case of smallpox on the vessel

Bring Records of Anticholera and Antituberculosis Vaccine—Dr Florestan Aguilar dean of the College of Dentistry of Madrid and Dr Sebastian Recasans of Madrid arrived in New York City on the Holland-American liner *Rotterdam* August 12 They bring with them the records of Professor Ferran on anticholera and antituberculosis vaccine which they expect to present to the Rockefeller Institute

Personal—Dr Charles G Child Jr has been appointed consulting gynecologist to St Bartholomew's Hospital New York City and to Nassau Hospital Mineola L I——Dr J Duncan Bulkley announces that he has retired from the active practice of dermatology and will devote his attention solely to consultation work in dermatology and to the treatment of cancer——Dr S Josephine Baker has been made consultant in child hygiene for the U S Public Health Service and has been commissioned as surgeon in the reserve of the service——Dr Margaret Bre[illegible]man alienist to become a member of the s[illegible] State Hospital has entered on her [illegible] ward of the institution——Dr Ro[illegible] years a member of the staff of [illegible]

pital, has been promoted to the position of first assistant at the Hudson River State Hospital, Poughkeepsie——Dr William A Wovschin, the Bronx, sailed for Europe recently to make a sanitary survey of Ukrainia, Poland and other plague-stricken European countries He will also make a special investigation for the New York State Board of Health, of the smallpox epidemics reported in Scotland and the north of England——Dr Magda Telkes was assigned on August 1 to the roentgen-ray department of the Mayo Clinic, Rochester, Minn, on a Mayo foundation scholarship in roentgenology

OHIO

Typhoid in Lakewood—Following a reception held in Lakewood, June 25, thirty-eight of the 211 guests are reported to have been ill from typhoid fever All the patients are said to be out of danger

Illegal Practitioners Fined—In the Cleveland Municipal Court on July 28, L D Moore was found guilty of practicing medicine without a license and was fined $500—On July 29 Leo J Czechowski on a similar charge, was fined $50 and costs with an additional $450 to be paid within a year He was ordered to cease the practice of medicine

Faculty Changes—The following promotions and appointments in the School of Medicine of Western Reserve University, Cleveland, are announced Drs Marion A Blankenhorn and Roy W Scott, promoted from instructors to senior instructors in medicine Dr Paul J Hanzlik promoted from assistant professor to professor of pharmacology and a member of the faculty, Dr Guthrie McConnell, appointed associate in pathology

Personal—Dr David Marine associate professor of experimental medicine in Western Reserve University, Cleveland, has been elected director of laboratories in the Montefiore Home and Hospital, New York City——Prof George M Stewart, director of the H K Cushing Laboratory of Experimental Medicine, had conferred on him the honorary degree of Doctor of Laws at the recent commencement exercises of the University of Edinburgh, Scotland——Dr James B Poling has been elected to fill the unexpired term of the late Dr Arthur L Jones, as health commissioner of Lima——Dr John D Spellman Cincinnati, has been appointed assistant superintendent of Mt Sinai Hospital, Cleveland and assumed his new duties, August 2——Drs George W Crile, Cleveland, and Charles J Lukens, Toledo were the guests of honor at the meeting of the Northwestern Ohio Medical Society at Cedar Point, July 27——Dr Isaac Kay, said to be the oldest medical practitioner in Ohio is seriously ill at his home in Springfield

PENNSYLVANIA

Baby Clinic Opened—A baby clinic has been opened at the Community House, Marietta, under the supervision of a nurse

Personal—Dr Frederick L Van Sickle, Scranton, president of the Lackawanna County Medical Society, has resigned to become executive secretary of the Medical Society of the State of Pennsylvania with headquarters at Harrisburg——Drs H Hershey Farnsler, Clarence R Phillips and William T Douglas, Harrisburgh, have resigned from the staff of the Dauphin County Tuberculosis Clinic

Physician's License Revoked—At a recent meeting the Pennsylvania Bureau of Medical Education and Licensure revoked the license of Dr William Bricker, Sr, of Philadelphia for having performed an illegal operation which resulted in the death of the patient Following his arrest Dr Bricker was released on $40 000 bail but immediately fled to South America where he is now fighting extradition proceedings

Philadelphia

Tuberculosis Society Examines Children at Playgrounds—Examinations for physical defects and for malnutrition are being conducted at playgrounds and recreation centers throughout the city by the Pennsylvania State Tuberculosis Association According to Dr Jeanette Sherman the examining physician, most of the children of Philadelphia are from 1 to 10 pounds under weight Whenever a child is found defective it is sent to the proper institution for treatment

Farm Opened by Health Council.—Philadelphia's first health-building home for children is being opened at Brown's farm near Torresdale by the Philadelphia Health Council and Tuberculosis Committee It is a direct result of findings in the health council's portable health clinics started in eleven recreation centers this summer Of the 999 boys and girls weighed and measured in the clinics during July only 300 were found normal in weight Virtually all of the 283 given thorough physical examination were found defective in some way

Relief for Soviet Russia—The Philadelphia district branch of the Soviet Russia Medical Relief Committee recently held one meeting at which $1,400 was raised and is arranging for a larger meeting to be held August 25, at which Dr John Ohsol, a member of the second Russian Duma, and M Isaac McBride, who has recently returned from Russia, will speak Appeals have been sent to physicians, dentists, druggists and manufacturers asking for contributions of money, drugs, disinfectants dressings and other surgical supplies which are urgently needed A conference will soon be called to consider the menace to the United States from the epidemic diseases raging in Russia

TENNESSEE

University of Tennessee Notes—The University of Tennessee College of Medicine will erect a pathologic laboratory building to cost $75,000 near the Memphis General Hospital This is in accordance with a contract between the university and the Memphis General Hospital by which the school has entire control of the teaching facilities in the hospital for a period of twenty years and the school will nominate the medical surgical and laboratory staffs of the hospital A similar arrangement is also in force with the Baptist Memorial Hospital During the year, eight scholarships have been established, two amounting to $102 each and six amounting to $60 each

The Oakville Sanatorium.—Oakville Memorial Sanatorium now in course of construction, is located on a tract of land of 160 acres near Oakville and is expected to be ready for occupancy February 1 There are to be five buildings, an administration building, a service building, two one-story buildings for men and women respectively and an infirmary for negro patients The initial capacity of the hospital will be 110 beds Plans are made providing for an increase to 300 or 400 patients if necessary The trustees have also reserved a tract of land of 10 acres on which to build a preventorium for children with tuberculous tendencies or who have been exposed to tuberculosis

TEXAS

Personal—Dr Eugene O Chimene, Houston, has been elected health officer of Floyd County, Ga——Dr Sarah Rudnick, Houston, sailed on the steamship *Belvidere* from New York for Serbia July 15, to do medical reconstruction work for the Serbian Child Welfare Association

Health Conditions on Mexican Border—After a conference between the state health officer and the state labor commissioner July 30, it is announced that steps will be taken to formulate a cooperative program to handle existing conditions on the Mexican border information having been received that large numbers of Mexicans without authority are crossing into Texas and may constitute a menace to the health of the citizens of the state

Bubonic Plague—One death from bubonic plague occurred in Galveston, July 28 and one July 29 This makes a total of five cases of plague in Galveston, four of which resulted fatally——A negro woman died in the Isolation Hospital, Beaumont, from bubonic plague One patient in that city continued to show improvement Beaumont has thus far had eleven cases of plague——Twenty thousand rats a week are being caught in Beaumont with a percentage of infected rats of about one fifth of 1 per cent——A conference of state and city health officers was held in Galveston, August 3 and 4, to consider measures for eradicating bubonic plague and to instruct health officials regarding the control of this disease

VIRGINIA

Library Founded—The Roanoke Academy of Medicine and Surgery has organized a medical library to be operated by, and in conjunction with the Roanoke city library

Sites for New Hospitals Offered—Twelve bids for sites for the new U S Public Health Service hospital have been received by the secretary of the chamber of commerce of Norfolk

Without Money Clinic Must Close—Dr William F Cooper, health officer of Newport News, has been notified that if the city council does not appropriate enough money to operate the detention house and city clinic, both institutions must be

closed The detention house and clinic need about $500 a month in salaries and an equal amount or more in food and medicine The council has been appropriating only $500 a month for both institutions

University News —The University of Virginia Medical Department has secured $16 000 from alumni and friends to provide additional equipment and instructors necessary to permit the admission of eighty instead of thirty-six students to the freshman class this fall Through a relationship established with the Blue Ridge Sanatorium of the Virginia State Board of Health which is located 2½ miles east of the university, medical students are to serve as clinical clerks the same as in the wards of the University Hospital This sanatorium is for tuberculous patients and has a capacity of 120 beds ——Arrangements have been made by the university to send its third-year students to the Catawba Sanatorium for a four-week course of instruction

WISCONSIN

Personal—Dr James P Dean Madison, was operated on for appendicitis, July 23 at St Mary's Hospital, Madison

New County Hospital Planned—It is announced that the county board has accepted the plans for the new Milwaukee County Hospital

New Duties for Health Officers—It is announced that all health officers in Wisconsin in municipalities of over 750 population are about to be enrolled as assistant collaborating epidemiologists

Help for Cripples—At a special session of the Wisconsin Legislature an order was passed making provision to undertake the care of children and adults suffering from deformities This bill is on the same order as the Haskell-Klaus bill which was passed in Iowa in 1918

Physicians' Picnic—The annual picnic of the Beloit Physicians' and Surgeons' Club was held on the grounds of the Beefsteak Club July 28——Rock County Medical Society held its annual picnic near Lake Koshkonong, July 29——Fond du Lac County Medical Society held its annual picnic at Green Lake July 29

GENERAL

Tuberculosis Conferences—The New England Tuberculosis Conference will be held at Concord N H September 29 and 30——The North Atlantic Tuberculosis Conference will be held at Richmond, Va October 7 and 8

Southwestern Pediatric Specialists Organize—Pediatric specialists of southern California Arizona and New Mexico met in Los Angeles recently and organized the Southwestern Pediatric Society, electing Dr Henry Dietrich president Dr C Edgerton Carter, vice president and Dr Oscar Reiss secretary-treasurer all of Los Angeles

Specialists Hold Session—At the eighth annual session of the Pacific Coast Oto-Ophthalmological Society held in Portland Ore July 29 to 31 the following officers were elected president Dr George W Swift Seattle, vice presidents Drs Edward E Maxey, Boise, Idaho, and Joseph O Chiapella Chico, Calif, and secretary-treasurer Dr Ernest C Wheeler, Tacoma, Wash

International Conference on Tuberculosis—The National Tuberculosis Association announces from its headquarters at 381 Fourth Avenue, New York City, that an International Conference on Tuberculosis will be held in Paris the week of Oct 7, 1920 The last International Conference on Tuberculosis was held in Rome in 1912 Leon Bourgeois president of the Council of the League of Nations will preside

Sale of Christmas Seals—The National Tuberculosis Association has appealed to trade journals and class publications for support in a national campaign for the sale of tuberculosis Christmas seals to be carried out from December 1 to December 11 It requests that publications use a special cover for one issue, use special stories or articles dealing with tuberculosis and the Christmas seal and use electrotypes or copy for display advertisements

Burial of General Gorgas—The body of Major-Gen William C Gorgas was interred at Arlington National Cemetary August 16 Services were held at the Church of the Epiphany Washington, D C whence a military escort of two troops of cavalry, a regiment from the tank corps a battalion of infantry, two companies of engineers a company of coast artillery motor ambulances and sanitary troops under command of Brig-Gen Grote Hutchinson conducted the body to the cemetery Members of the cabinet and of the diplomatic corps, officers of the Army Navy Public Health Service and the American Medical Association noted scientists and physicians participated in the last honors paid to the great sanitarian

American Congress of French-Speaking Physicians.—The *Bulletin medical de Quebec* announces that the Sixth Congress of French-Speaking Physicians of North America is to be held at Quebec Sept 9 to 11 1920 So many have sent in their names already that it promises to be the most successful gathering of the kind yet held The four subjects appointed for discussion are nephritis treatment of wounds, industrial accidents and venereal diseases There are to be five reports on the last mentioned subjects and two for each of the others The speakers include Drs A LeSage G Ahern A. Simard and A H Desloges The president and secretary are Drs Arthur Rousseau and A Vallee and they warn to apply early for hotel accommodations

Suicides Increase—The semiannual report of the Save-a-Life League reports that during the first six months of this year there were 2 771 suicides in the United States of whom 1 810 were men and 961 women There were 2 063 in the same period last year In New York according to the report there were 341 suicides in the first six months of this year Of these 234 were men and 109 women The most frequent means employed was illuminating gas 141 having died in this way The figures show that there has been an increase in the number of suicides among women which the league attributes to the complexity of their lives owing to their entrance into business and political life During the past six months eighty eight boys and 157 girls have committed suicide an increase of fifty over last year's report for the same period Boys most frequently use a gun and girls take poison These facts the report points out call for strictly enforced laws to suppress the sale of firearms and poisons

LATIN AMERICA

Brazil Extends Medical Facilities to Paraguay—The government of Brazil has extended the facilities of Brazilian laboratories and clinics to the physicians and medical students of Paraguay

Uruguayan Commissioner in the United States—Dr Francisco Torres Insargarat special commissioner of the government of Uruguay is now visiting the most important cities of the United States including Chicago

Pavilions for Steerage Passengers.—The National Board of Public Health of Uruguay has been authorized to build several pavilions for steerage passengers in the lazaretto on the Island of Flores at an estimated cost of $25 000 pesos (about $10 000)

Rockefeller Mission in Brazil.—The *Brazil Medico* states that Drs Rose and Hackett of the Rockefeller mission to Brazil were given a rousing welcome on their recent arrival at Bello Horizonte. The entire faculdade de medicina and other local members of the profession were at the depot to meet them

Personal.—Drs O de Oliveira and Carvalho Azevedo of the faculdade de medicina of Rio de Janeiro recently left for Europe——Dr A Lindenberg and Dr O de Sousa have returned from Europe The latter was on a special commission from the Rio faculdade de medicina and will resume his course on physiology

New Clinic in Uruguay—There have just been installed in the Hospital Militar Central Montevideo a gynecologic clinic and a polyclinic for the treatment of children's disease Dr Eduardo Blanco Acevedo director of the surgical service will be in charge of the clinic and Dr Nieto Zervino in charge of the polyclinic

Public Health Board at Guatemala—The president of Guatemala has appointed the following members of the Superior Board of Public Health Dr Alberto Padilla Dr Mario J Wunderlich Dr Antonio G Valdeavellano Licdo Hector Aparicio Licdo Juan F Melgar Dr Guillermo Cruz and Ingeniero Felix Castillo There has also been organized a public health police under the orders of the board

FOREIGN

Appropriations for Research on Tuberculosis—The Robert Koch endowment a Berlin has granted Professor Lüdke of Berlin 15 000 marks and Professor Selter of Königsberg 6 000 marks to aid in continuing their research on tuberculosis

Institute for Research on Proteins—A sum of 500 000 marks has been donated to the University of Halle

found an institute for research on albumins It is to be in charge of Professor Kossel and to be affiliated with the Institute for Hygiene

Prize for Work on Orthopedics—Owing to a recent legacy from Dr P Redard of Paris, the Academie de medecine offers a prize of 5,000 francs every fifth year for the best work on orthopedic surgery Competition is open to physicians of all countries and to interns of the Paris hospitals

Faure's Hymn to Peace—The Paris *Figaro* offered a prize for a hymn to peace, and had the best six, among the seventy submitted, set to music The one selected by Saint-Saens for his musical setting proves to be the work of Prof J L Faure, the successor of Pozzi in the chair of gynecology in the Paris Faculte de medecine

Cambridge Gives Americans Degrees—Prof John Jacob Abel professor of pharmacology in Johns Hopkins Medical School, Baltimore, and Dr Harvey Cushing, professor of surgery in Harvard University Medical School, Boston, had conferred on them the honorary degree of Doctor of Laws by Cambridge University, July 29

Outings for German Children in Denmark—The *Deutsche medizinische Wochenschrift* states that 8,000 German children have been given hospitality in Denmark since last October, one institution took 500 About half the total were children of the laboring classes Each child was given a short outing, new clothes and foodstuffs to bring home to an average weight of 15 kg

Memorial to Van Engelen—A tablet on the wall of the Saint-Pierre Hospital at Brussels was recently unveiled with much ceremony in honor of the eminent surgeon, Van Engelen, who died in 1918 The funds collected for the purpose proved sufficient to found in addition an annual prize for an intern in the surgical service, to be awarded in the form of books and instruments

International Anthropology Institute—In the second week of September there is to be a gathering at the Ecole d'anthropologie at Paris of a number of persons interested in making this the international center for the anthropologic sciences, including ethnology eugenics, medical geography, comparative anatomy etc Those interested in the matter are asked to send in their names to the secretariat, Ecole d'anthropologie rue de l'Ecole-de-medecine, 15, Paris

Vital Statistics in Spain—The *Siglo medico* states that 306 394 boys were born in Spain during 1919, and 278,958 girl babies, to a population of 20 355,986 Over 482 000 deaths were recorded including 163 198 children under 5 Typhoid was responsible for 5 677 deaths, typhus for 228, tuberculosis for 29 700, cancer for 12 525 and heart disease for 37 883, acute bronchitis for 22 166 and chronic bronchitis for 11,705, suicide for 847, and other forms of violence for 6,909

Medical Work in Palestine—Medical work in Palestine has advanced rapidly during the past two years stimulated by the physicians and nurses of the American Zionist Medical Unit Clinics are being held and lectures given at regular intervals The hospitals and clinics established by the unit in Palestine will be eventually taken over by the Medical College of the Hebrew University, Jerusalem, plans for which are being designed by Prof Patrick Geddes of the University of Edinburgh

Monument in Memory of Brissaud—It is proposed to erect a memorial at Tournai in Belgium to honor the memory of Brissaud who was the first to locate and describe cataract correctly, he thus paved the way for Daviel's extraction Many leading ophthalmologists of Belgium and France are on the committee in charge of the matter, and appeals are being made for subscriptions which can be sent to the secretary, Professor Terrien 41 rue Pierre-Charron, Paris, or to any member of the committee

Memorial to Lannelongue—A monument to Lannelongue was dedicated in July in his natal town Verduzan representatives from the government and scientific societies having charge of the ceremony One report of the ceremonies adds that his name is perpetuated otherwise by prizes in various scientific organizations museums he founded and the numerous works he published on the pathology of the bones, etc, and by the influence he exerted in parliament and as president of different organizations until his death in 1911

Malaria in Italian Soldiers—Representatives of the government departments of the Red Cross, and others recently conferred and adopted a plan for systematic treatment of the demobilized soldiers in Italy who are still suffering from malaria A census throughout the country of all such cases is to be taken and provisions made for treatment at home or in four sanatoriums to be organized in various mountain regions While the man is staying at the sanatorium, his family is to be paid a certain daily allowance Vigorous propaganda is now under way to convince the men of the necessity for taking treatment

The Weekly Cinematophotograph—A new Paris medical weekly has made its appearance, the *Vie medicale,* which seeks to photograph or, as it says, to cinematophotograph in words, in journalistic style, the happenings of the week in medical circles, like a daily paper The first issue has thirty-two pages, and contains among other things two comprehensive articles on lethargic encephalitis and comparative human and veterinary medicine The report of the meetings of the Academie de medecine is written in breezy style by a girl medical student The *Vie medicale* is issued 48 rue Geoffroy, St Hilaire 49 Paris, for 25 francs a year Drs Aloncle and L Nass are the director and editor, respectively

Deaths in Other Countries

Dr **A Antonelli**, a prominent Italian ophthalmologist long resident at Paris——Dr **C F I von Wahlberg**, a leader in the organization of the profession in Finland, aged 72 Since retirement from practice he has published several novels and dramas——Dr **O Schultze**, professor of anatomy and embryology at the University of Wurzburg, aged 61——Dr **O S Dastugue**, subdirector of the Institute of Physiotherapy at Buenos Aires and assistant professor of radiology in the medical school, aged 30——Dr **J E Garcia** of Buenos Aires——Dr **E Lombard**, an otologist of Paris——**Ethel Amy Mordaunt**, Bromley, Kent, England, L R C P, L R C S, Edinburgh, 1908, L F P S, Glasgow 1908, was struck and killed by a motor scooter in Bromley, recently——Dr **Armand Gautier**, formerly professor of chemistry and physiology at the University of Paris president of the Academie de medecine and of the Academie des sciences, and author of numerous works on chemistry and especially on the therapeutic use of arsenic, aged 83——Dr **J S Dauriac**, a well known surgeon of Paris whose latest work, "Chirurgie reparatrice des os," had just gone to the printer at the time of his death——Dr **C S Rodriguez** of Buenos Aires——Dr **J da Costa Lima e Castro**, professor of surgery in the University of Rio de Janeiro aged 62——Drs **Bemfica de Menezes** and **A Pinheiro**, both of Rio de Janeiro

Government Services

Conference on Venereal Diseases

An All American Conference on Venereal Diseases will be held in Washington, D C, Dec 6-15, 1920, under the auspices of the U S Public Health Service Dr William H Welch has been nominated secretary of the conference

Enlargement of War Risk Hospital

Alterations and additions at the United States hospital at Perryville Md will enable the Public Health Service to care for approximately 250 additional patients under the war risk act The hospital has accommodations for more than 1,000 patients and will be limited to cases of psychoneurosis

Course for Health Officers

The U S Public Health Service, in cooperation with Georgia state authorities has established a course of instruction in health work at the University of Georgia Medical School, Augusta The course is designed to give special training to county health officials of the state and an instructor from the Public Health Service will occupy the chair throughout the term

Shortage of Chemicals for Water Purification

At the urgent request of the Public Health Service the commission on car service of the American Railroad Association has relieved the shortage of the aluminum phosphate, bauxite, chlorin, calcium hypochlorite, soda ash, copperas, lime and other chemicals used for the purification of water at municipal water plants The health of millions of people was threatened by a scarcity of these materials at filtraton plants due to the failure of the railroads to furnish sufficient cars to the manufacturers

Plague Prevention Measures

Surg-Gen Hugh S Cumming of the U S Public Health Service, after his return from a plague conference at Galveston, Texas, declared that there has been no spread of plague to other gulf ports and that on investigation two suspicious cases in Mississippi and Texas had been proved not to be plague At the request of local health authorities, rat surveys will be conducted by the Public Health Service in Charleston, S C, and in Florida and Texas seaports Plans for radical changes in the construction of business buildings, dwellings and wharves are being drawn up as part of a nation-wide campaign for rat extermination, following recommendations of the health officers in attendance on the conference to study bubonic plague and rat extermination The specifications will be furnished to the different states and cities in order that they may be incorporated in the building codes throughout the country

Hospital Service of the Bureau of War Risk Insurance

In the Sundry Civil Bill, which carried appropriations of $46 000 000 for medical and hospital services for beneficiaries of the Bureau of War Risk Insurance authority was granted to make the necessary expenditures for converting soldiers homes into hospitals for war risk insurance patients At a conference between Gen Leonard Wood, president of the board of managers of the National Homes for Disabled Volunteer Soldiers Dr T W Salmon representing the Mental Hygiene Committee, Dr H A Pattison representing the National Tuberculosis Association and R G Cholmeley-Jones director of the Bureau of War Risk Insurance, it was decided to convert two of the soldiers' homes for the exclusive treatment of tuberculosis, and one for the exclusive treatment of mental diseases each of these hospitals will accommodate 1 000 patients There are now 17 625 war risk insurance patients in hospitals, 7 980 of these are in Public Health Service hospitals and 9 645 in about 900 hospitals and institutions not under control of the government It is estimated that by June 30 1921 approximately 30 000 war risk patients will be under treatment in hospitals Existing facilities of the War Department will provide for 4 000, the soldiers homes will accommodate 6 000 and the Navy Department hospitals can make provision for 4 000 Approximately 15 000 beds are already under control of the Public Health Service and there will therefore be accommodations for 29 000 patients in hospitals owned and operated by the government

HONORABLE DISCHARGES, MEDICAL CORPS, U S ARMY

NOTE.—In the following list L signifies lieutenant C captain, M, major L C lieutenant-colonel, and Col, colonel

CALIFORNIA
Alameda—Moore L O W (I)
Sacramento—Munger A L (C)
San Francisco—Ross C C (L)

GEORGIA
Decatur—Pitman J F (C)

ILLINOIS
Chicago—Seifert E H (I)
Odell—Shankland J W (C)

INDIANA
Salem—Bierach J L (C)

KENTUCKY
Holland—White J W (L)

LOUISIANA
New Orleans—Nev F W (M)

MICHIGAN
Lansing—Barber C I (C)
St Johns—Buck R C (C)

MINNESOTA
Cloquet—Guttard V D (C)

MISSISSIPPI
Falkner—Pearce R S (L)

MISSOURI
Boonville—Lyle C F (L)
Kansas City—Field A C (L)

NEBRASKA
Omaha—Davis A L (C)

NEW JERSEY
Trenton—Denel beck J G (I)

NEW YORK
Amagansett—Babcock H E (M)
Gloversville—Ward I J (C)
Little Falls—McGillicuddy J G (L)
New York—Healy M F (C)
Rovitti F (L)
Sharlit H (L)
Toomey J H (L)
Syracuse—Reid C D Jr (L)

OHIO
Dayton—Bayle C O (C)
Plymouth—Holtz J F (L)

PENNSYLVANIA
Butler—Ketterer C H (C)
Meadville—Rosenberger A J (I)
Philadelphia—John R I (M)

SOUTH CAROLINA
Cross Hill—Klugh G F (C)
Spartanburg—Myers D V (L)

TENNESSEE
Memphis—Baldwin W H (M)
Oliver Springs—Shelton W A (C)
Paris—Wyatt M C (I)

TEXAS
Dallas—Mathewson E H (M)

WASHINGTON
Sedro Wooley—Hehir J (C)

WEST VIRGINIA
Elizabeth—Brown C N (C)
Spencer—McQuain J F (C)

Foreign Letters

PARIS

(From Our Regular Correspondent)

July 20 1920

International Congress of Surgery

The International Surgical Society at its last general assembly just ended decided to hold its next international congress at London, July, 1923 under presidency of Professor Macewen, Glasgow It was voted to continue to exclude the surgeons of the central empires The International Surgical Society was founded in 1902 through the initiative of the Societe belge de chirurgie and includes about 700 members It has held five congresses the first three of which met in Brussels under presidency of Lucas-Championniere in 1905 Kocher in 1908 and Czerny in 1911 The fourth congress was held in New York under presidency of Professor Depage and the last was just held in Paris under presidency of Dr W W Keen

The Paris Surgical Society

The Societe des chirurgiens de Paris which hitherto has admitted to membership only the professional surgeons, voted to admit associated members chosen from among physicians who are practicing related specialties or are working in fields which have contributed to the evolution of surgery The resolution is inspired by a desire for collaboration with the pathologists bacteriologists chemists physiologists, physiotherapists radiologists and radiumtherapists in particular, and in general with all physicians whose work might be of benefit to the science of surgery

Death of Gautier

Dr Armand Gautier onetime professor of chemistry at the Paris medical faculty died recently at Cannes Armand Gautier was born Sept 23 1837 at Narbonne received a scientific and medical education at Montpellier, and graduated M D, at Paris in 1862 He was a student of Wurtz under whom he became professor agrege in 1869 and succeeded his teacher in the chair of chemistry fifteen years later In 1879 he was elected a member of the Academie de medecine and of the Academie des sciences ten years later

Gautier was one of the greatest of modern chemists His researches on ptomains discovered by him in 1873, and on alkaloids of bacterial origin and his discovery of alkaloids from animal tissues or leukomains won him a reputation in scientific medicine On the other hand his experiments with organic compounds of arsenic led to the practice of subcutaneous injections of sodium cacodylate

Gautier's most important works are his *Cours de chimie minerale et organique* (1895) *Les toxines microbiennes et animales* (1896) *Leçons de chimie biologique normale et pathologique* (1897), and *L'alimentation et les regimes chez l'homme sain et chez les malades* (1904)

Appreciation of the American Activities Against Tuberculosis

Several months ago I mentioned in these pages (THE JOURNAL May 8 1920 p 1339) the recognition given by the Academie de medecine de Paris on the motion of Professor Letulle to the activities of the American Red Cross campaign against tuberculosis in France during the war In turn the Academie royale de medecine de Belgique devoted its attention to this subject [illegible] before the Academy the report of the [illegible] on the Prevention of Tuberculosis [illegible] attention to the impo[illegible] [illegible] invitation of [illegible]

enlose, the Rockefeller Commission has been making in Belgium At Tournai, Namur and Huy, these took the form of a seven day propaganda against tuberculosis Dr Linsly R Williams, director of the commission, Major Stuart, director of propaganda, and Miss F Elizabeth Crowell, superintendent of visiting nurses, came to Brussels not only for the purpose of conducting a popular campaign but also to demonstrate to a selected public the organization, working methods and practical achievements of the commission M Sand found the commission's methods admirably adapted to the popular mentality They include meetings, the "guignol," moving pictures, postcards, posters and pamphlets They reach the children, mothers, workers, soldiers, the general public, civil, military, school and ecclesiastic authorities Everywhere the commission leaves behind a tuberculosis dispensary as a permanent trace of its tour

The nucleus of the organization is American and it is financed by the Rockefeller Foundation of New York, the consultants, however, are French, and the commission as soon as its work is finished, commits it to the hands of local committees Its activities started about three years ago, and in that time it has covered thirty-three departments of France

Dr Bordet, director of the Pasteur Institute of Brussels, who has also assisted at the demonstrations of the Rockefeller Commission, thinks that Americans have found the necessary means of making the masses comprehend He likewise proposed that the Academy put itself on record in favor of a similar organization in Belgium

LONDON

(From Our Regular Correspondent)

July 30, 1920

Panel Physicians' Records

The ministry of health has been considering the form in which panel physicians records should be kept, and has consulted Sir James Mackenzie on the point He has submitted a characteristic memorandum in which he declares that legislation founded on such statistics as are available today would fail for the reason that, apart from slight affections, such as toothache, from 90 to 95 per cent of the complaints which the panel physician sees are undiagnosable even by the most experienced, and most of the small percentage that are diagnosed according to present methods would fail to convey an accurate notion of the real nature of the illness He outlines what he conceives to be the defects in medical knowledge at the present day

Our present classification of disease in the living is based 'upon the morbid anatomy of the dead," and the idea has sprung up in consequence that ailments can be classified according to gross structural changes such as can be seen postmortem Vast numbers of patients, however have ailments that cannot be so classified—there is as yet no structural change Their signs of disease are distressful sensations Then comes the error the physician is likely "to take the most prominent symptom or sensation and consider it to be the disease ' for example, neuralgia, dyspepsia anemia, palpitation, neurasthenia" The truth is that there are always in these cases other symptoms and when these symptoms are gathered together they are found to show a disturbance of so many different organs that the conclusion is forced that there is a common cause which upsets the balance of the different organs In consequence, the physician should not be forced to 'give a name to each disease but should keep records that will enable these symptoms to be related one to another and the real underlying diseases to be found For this purpose index cards are suggested We spend vast sums on drugs and yet 'there is no accurate knowledge as to the effect of a great many remedies" Moreover, if symptoms of disease, and not diseases themselves, are treated, further waste must occur Special investigators should study in actual practice the drugs most in vogue, and make known their findings regarding action and uses Thus a new era in medical treatment would open To remedy these defects, the physician must be taught how to carry on research into the early symptoms of disease If there was a scheme by which he could learn how to question a patient intelligently, how to make short but accurate notes, how to watch the patient as he passes from one phase of disease to another, the working of the insurance act would be greatly facilitated year by year, while a great impetus would be given to the investigation of these dark fields of medicine which only the general practitioner can explore

A committee appointed by the minister of health to report on note taking by panel physicians, and presided over by Sir Humphry Rolleston, has also issued its findings These are to a great extent in sympathy with Sir James' views An envelop, it is advised, should be issued to each physician in respect of each insured person on his list This should bear, when it reaches the physician, the patient's name, address, society, number, the physician's name, the committee's cipher, and the date There should be different colors in use for female and male Thus, on visiting the patient the physician will merely require to make a few notes on the envelop, e g, date of visit, age, etc The "notes" should be written first on the backs of the envelops and then on cards to go inside the envelop These should be such as "are likely to be of value to the physician himself, or to any other physician treating the same patient in subsequent illnesses" The physician will thus be able to describe fully the symptoms he sees, and the cards will form in time a full record of each patient's health without being at all irksome to the busiest physician

The Lister Memorial Fund

The general committee of the Lister memorial fund has received the report of the executive committee appointed in 1912 The subscriptions from the British Empire and foreign countries amounted to $59,230 A memorial tablet by Sir Thomas Brock was unveiled in Westminster Abbey, Nov 1, 1915 and steps are being taken for the erection of a monument in a public place in London In order to carry out the scheme adopted in 1912 for the establishment of the international Lister memorial fund, the following proposals were adopted 1 That $2,500 out of the general fund, with a bronze medal be awarded every three years, irrespective of nationality, in recognition of distinguished contributions to surgical science, the recipient being required to give an address in London under the auspices of the Royal College of Surgeons 2 That the award be made by a committee constituted of two members nominated by the Royal Society, two by the Royal College of Surgeons of England, one by the Royal College of Surgeons in Ireland, one by the University of Edinburgh, and one by the University of Glasgow 3 That any surplus income of the general fund, after providing for the erection of a monument, and after defraying administrative expenses, be either devoted to the furtherance of surgical science by means of grants or be invested to increase the capital of the fund The continued carrying out of this scheme in future years will require the provision of some permanent and adequate machinery, as the Lister memorial committee cannot in view of its constitution, be itself permanent The committee, having ascertained that the Royal College of Surgeons of England would be prepared to become the trustees and administrators of the fund and to carry out its objects, authorized the executive committee to take the necessary steps to give effect to this arrangement.

War Memento from British to American Surgeons

As a memento of the work done in cooperation by American and British surgeons during the war a number of the latter have had made a silver-gilt mace, which is to be presented to the American College of Surgeons The gift is the suggestion of Sir Berkeley Moynihan, with whom Sir Anthony Bowlby (president of the Royal College of Surgeons) and Sir D'Arcy Power collaborated The mace is the work of a well known worker in metal, Mr Omar Ramsden A surgeon's mortar dug up in a Salonika trench was the model for the head, which is surrounded by maple leaves and American eagles The badges of the British and American Army Medical Corps and the serpents of Esculapius are prominent, the name of Philip Syng, the father of American surgery (who was at St George's Hospital before he went across the Atlantic), is introduced, and the roll of subscribers will be engraved in due course An inscription on the mace reads From the consulting surgeons of the British Armies to the American College of Surgeons in memory of mutual work and good fellowship in the Great War"

BELGIUM

(From Our Regular Correspondent)

July 28, 1920

Child Welfare

Under a law passed Sept. 5, 1919 all agencies and interests devoted to child hygiene which were formerly the exclusive object of private charity are incorported in the newly established Oeuvre nationale de l'enfance These charities have been extending over Belgium for some years and the war gave even greater impetus to the movement At the time of the armistice there were infant clinics in about 800 towns and there were numerous maternity canteens, school lunches were being distributed to more than 1,000 000 children, and there were eighty-five colonies in which from 5,000 to 6 000 debilitated children were received in each month

Minister Jaspar who recently presided at the opening session of the Conseil superieur des oeuvres de l'enfance, recalled the favorable results already attained by past activities and outlined the great projects which still await execution The Oeuvre nationale, such as it is, was conceived by the legislature for the sole purpose at present, of protecting the younger children by the establishment of infant clinics maternity canteens, colonies for debilitated children school lunches and milk stations (gouttes de lait) But this does not mean that its sphere will be limited to these activities It will have to pass on the establishment of all additional related activities, it will determine especially as brought to light by the report on the last budget of the Ministry of Economic Affairs whether besides the maternity canteens there is urgent need of other organizations for the protection of mothers and infants

The infant clinics are the cornerstone of the whole structure, and more than 800 have been established to date It is necessary that all infants of the country and especially those whose parents do not have the means to pay for medical services, should be brought to these clinics in the first months of life

The maternity canteens will perhaps be attached to coal mines and to other industries employing women in short they will be installed wherever proximity to the work of husband or wife gives reason to anticipate that they will be serviceable

During the war, school lunches were introduced in all the communes of the country in other words in all the schools Thanks to the patriotism of our fellow citizens we did not see a recrudescence of the old school quarrel during that time Under the Conseil superieur it should no be revived in the days of peace and to obviate this absolute separation of the teaching function from the question of feeding is necessary

The colonies for debilitated children have already obtained brilliant results Not only that 10 000 children of the cities and industrial centers, thanks to these colonies and to the generosity of property owners who loaned more than eighty chateaux and houses for the work were able to spend several months in the open air and to recuperate from their aggravated undernourishment The average gain of each of these children was from 2 to 3 kilograms The work of the colonies also contributed greatly to prevent the terrible increase in tuberculosis from affecting the younger generation It is self evident that it will be impossible in times of peace to maintain the colonies on the same extensive basis but it is certainly equally indispensable to give children of all ages from the side streets and alleys an opportunity to go to the country or the seashore Because of this the system inaugurated by which the colonies will remain open all year round seems most favorable

Federated Biologic Societies

A federation of the Reunions biologiques affiliated with the Societe de biologie de Paris was recently formed in the laboratory of Professor Brachet at the Institut anatomique du Parc Leopold The reunions of Brussels, Lille Lyons, Nancy Strasbourg, Bucarest and Copenhagen were represented, and the secretary general of the Societe de biologie also attended Professor Bordet president of the Reunion biologique de Bruselles declined the presidency in deference to Professor Bard of Strasbourg The next meeting is scheduled at Strasbourg in the autumn of 1921

BUENOS AIRES

(From Our Regular Correspondent)

June 30 1920

Lethargic Encephalitis

In a short time there have been observed quite a number of isolated cases of lethargic encephalitis In some of the Buenos Aires clinics three and four cases have been treated There have been cases in different towns as far as Salta which is in the northernmost part of the country The Argentine Medical Association at its last meeting discussed four cases of the disease presented by Drs J Destefano, A Viton S Dessy F Grappiolo T Martini and J Bertermi A few days afterward several cases were also reported before the Society of Pediatrics

Argentine Medical Association

This association which includes the majority of the medical societies of Buenos Aires has decided to increase the number of affiliated societies So far during this year the societies of biology medicine and surgery have operated successfully

Pneumoperitoneum

In the medical section of the Argentine Medical Association there have been presented several papers on the application of pneumoperitoneum to the roentgen-ray diagnosis of abdominal diseases This method has become popular in several hospitals

Centenary of the Academy of Medicine

The Academy of Medicine of Buenos Aires has decided to celebrate its first centenary in 1922 with a congress of medicine and allied sciences Three prize will be granted for the best papers presented the first of 5000 pesos and a gold medal the second 3000 pesos and a silver medal and the third 1 000 pesos and a diploma (A peso is now worth about 40 cents) The academy has appointed [illegible] increasing its activities for so far

fourteen members, has shown little life Some scientific lectures are planned for the near future, and one has already been given The academy has asked the government to furnish it with a building of its own

Institute of Surgery

There is now pending in congress an appropriation to furnish with the necessary facilities the chair of clinical surgery The school of medicine has under consideration the creation of an institute of surgery

Meeting of the Argentine Medical Association

The Argentine Medical Association has decided to hold a congress on internal medicine next October The subject to be discussed will be "Cranial Hypertension"

Titration

Dr A Sordelli announces that antidysenteric toxins and serums may be titrated quite accurately with birds as controls

BERLIN

(From Our Regular Correspondent)

July 15, 1920

Germany's Food Problem

A memorandum of the national ministry of food and agriculture gives a survey of the food problem of Germany Because of the extraordinary difficulties during the war and the shortage of labor and fertilizer, the acreage of the most important foodstuffs, such as bread cereals, potatoes and sugar beets, has been greatly reduced and the average yield has simultaneously declined From 1913 to 1919, the harvest yield per hectare (2 47 acres) of bread cereals decreased 21 per cent, of feeding grains, 25 per cent, of potatoes, 31 per cent, and sugar beets 30 per cent With the reduced boundaries, Germany's production of bread grains dropped from 13,300,000 tons in 1913 to 8,500 000 tons in 1919, potatoes from 40,300,000 to 21,400,000 tons, and sugar beets from 12,900,000 to 5 800 000 tons An especially serious complication is the fact that by the loss of productive agricultural sections, especially in the east, Germany is deprived of a considerable food surplus The number of cattle fell off from 18,000 000 in 1913 to 16 500 000 in 1919, milch cows from 9,100,000 to 7 600,000, hogs from 18,500,000 to 11,500 000, all told, not less than 41 per cent The average yearly milk yield fell from 2,700 to 1,200 liters, and the total milk production declined from twenty-four to nine billions of liters, while the slaughtering weight of cattle, sheep and hogs dropped as much as 50 per cent Germany is therefore compelled to continue the rationing of some of the most necessary foods and these rations have been reduced to such an extent that they represent only about one half of the minimum calory requirement of an adult man Since the country is not yet in position to import the required foods to make up the deficit, the population as a whole is still in a state of undernutrition, a condition which has entailed terrible sacrifices On the one hand, the growing generation is being sapped of its strength while on the other hand, the adult populace is unable to regain its full working strength As a result it is impossible to speed production in the mines and industries The miners especially have complained repeatedly regarding the insufficient diet, laying particular emphasis on the fact that the bread is made of as high as 80 per cent filler The present industrial conditions make it impossible for a growing element of the populace to pay for even the small allowance of food at the reduced prices established by the government The weekly ration at the present, for instance, consists of legumes, sugar, marmalade and artificial honey with a calory value of 12,600, but it costs 101 marks as compared to 7 77 marks six years ago The import requirements of Germany in the next fiscal year will total 2,000,000 tons of bread grains, the same quantity of feeding grains, 750,000 tons of oil seeds, 180,000 tons of meat and bacon, 144,000 tons of fats, 500,000 tons of fish, 500,000 tons of phosphate rock and 350,000 tons of pyrites, with a money value, all told, of 3,403,600,000 gold marks

The Conflict Between Physicians and Krankenkassen

At a meeting between representatives of the physicians and the krankenkassen, June 4, an agreement was virtually reached, according to which medical arrangements are to be left to free agreements between the krankenkassen and individual physicians or medical societies Where the free choice of physicians is already in practice, this system must be maintained, provided it does not endanger the existence of the kasse Under this scheme an insured patient can consult virtually any qualified physician In rural communities a patient may call the nearest physician, and may call an additional qualified physician in consultation, provided he assumes the extra cost Payments for services rendered are to be made by the kasse direct to the attending physician's fee for office visits being 4 marks, and for home visits, 6 marks For other services, the minimum stipulation of the projected revision of the official Prussian fee scale shall apply Until this is published, a 15 per cent increase shall be added over the prevailing scale, except in obstetric cases, in which the increase shall be 400 per cent Lump sum payments shall be subject to local agreement, and in occupied territory an additional increase is granted The new fees are effective as of April 1, 1920 Travel allowances, which would include compensation for the loss of time as well as actual traveling expenses, shall be 6 marks for every two kilometers by day and 10 marks by night If the physician is furnished the means of travel, he shall be compensated for the loss of time at the rate of 2 marks for 2 kilometers by day and 4 marks by night To supplement and improve the medical treatment and to advance the interests of public welfare the kassen are authorized to establish diagnostic, consulting and dispensary clinics and physiotherapeutic and mediomechanic institutes These shall be placed at the free disposal of the insured members and their dependents In the future, disputes between the kassen and physicians shall be settled by courts of arbitration subject to appeal to superior courts, the definite establishment of which will follow after supplementary agreement

Depending on local agreements, certain exceptions are incorporated in the general arrangement In Berlin, for instance, the system of free choice of the attending physician will be introduced throughout Beginning with April 1, 1920, the quarterly capitation fee is fixed at 7 50 marks, with an additional 2 5 marks in the first quarter While the fee scale applies only for 1920, the other provisions will be valid for five years Subsequent conferences shall determine the procedure regarding any matters still in dispute General free choice of physicians shall go in effect as soon as the necessary administrative arrangements have been made The parties to the agreement are in accord on one point, that if any kasse does not introduce the new system, its physicians shall be excluded from obtaining any benefits from other kassen operating under the new system In Wurttemberg and some other states special agreements have been made between physicians and kassen, some of these are more favorable than that which has been arranged for the whole country Although the physicians did not obtain all their demands, there is considerable cause for satisfaction over the terms One particularly happy feature is the apparent willingness of the krankenkassen to settle the questions relating to the medical care of its members in an amicable manner rather than to seek a quarrel at every opportunity

Marriages

BERTRAM GROESBECK, JR, Lieut M C, U S Navy, to Miss Maria Commelas Canals, at San Francisco de Macoris, Dominican Republic, June 19

LOUIS G MARTIN, Capt, M C, U S Army, Camp Gordon, Ga, to Miss Caroline Douglas Oden, in New York City, August 2

ABRAHAM MATTES to Miss Henrietta D Pearlstine, both of Charleston, S C, in New York City, July 27

ERNEST E PARKER, Oxford, Ind to Miss Mary Francis Kennedy of Templeton, Ind, at Oxford, July 26

EARL D JONES, Roberts, Idaho, to Miss Bessie May Badley of Wichita, Kan, August 6

ALBERT J WITTSON to Mrs Mabelle Lindley Burras, both of New York City, August 6

L FORREST SWANK to Miss Mary Coryell, both of Indianapolis, July 31

Deaths

Louis Joseph Dandurant, St Joseph, Mo, Central Medical College of St Joseph, Mo, 1898, aged 45, a specialist in surgery, president of the Buchanan County Medical Society, captain, M C, U S Army, and discharged Dec 5, 1918, professor of materia medica and pharmacology in Ensworth-Central Medical College, St Joseph, a member of the local board of health, was drowned in the Missouri River, near Bean Lake, August 1, when his automobile plunged through a washout into the river

Daniel Clark Jones, St Louis, Rush Medical College, 1863, Medical College of Ohio, Cincinnati, 1866, aged 82 once mayor of Topeka, Kan, surgeon-general of Kansas and president of the state board of health, surgeon of the Second Illinois Cavalry during the Civil War and for eighteen years chief surgeon of the National Homes for Disabled Volunteer Soldiers at Leavenworth, Kan, and Danville, Ill, died at the home of his daughter, July 27

Benjamin George Pool, Washington, D C, George Washington University, Washington, D C, 1879, aged 65 a member of the Medical Society of the District of Columbia, and the Association of Military Surgeons of the United States, surgeon of the Fourth Battalion, D C N G, for many years, died at the home of his daughter in Washington May 25, from myocarditis

Olga Davis, Chicago, College of Physicians and Surgeons, Chicago, 1909, aged 45, a specialist in diseases of children and for many years a member of the staff of the Emanuel Mandel Memorial Dispensary of Michael Reese Hospital, died at Mackinac Island, Mich, August 9 from heart disease, a month after an operation for disease of the gallbladder

Matthew Joseph Hoey, P A Surg, U S P H S reserve, San Francisco, College of Physicians and Surgeons San Francisco, 1905, aged 38, for nine years in the service of the Panama Canal Zone, and quarantine officer at Balboa for six years, died in the U S Marine Hospital, San Francisco, August 1, from acute parenchymatous nephritis

Harold Lee Meierhof, New York City, Columbia University College of Physicians and Surgeons, New York City 1917, aged 26, Lieut, M C, U S Army, and discharged Jan 11, 1919, an intern at Mt Sinai Hospital, New York City, died in that institution August 5

Charles Henry Althans, Brooklyn, University of the City of New York, 1881, aged 83, surgeon of the Fifty-Second New York Volunteer Infantry during the Civil War, a practitioner and druggist for more than sixty years, died in Bellevue Hospital, August 4

Norman Perkins Quint, West Medway, Mass Harvard University Medical School 1870, aged 73, a member of the Massachusetts Medical Society, medical examiner (coroner) of the Seventh Norfolk District for twenty years, died in a hospital in Boston, July 27

Arthur Lloyd Jones ⊕ Lima, Ohio, Fort Wayne (Ind) College of Medicine, 1897, aged 48, captain, M R C, U S Army, and discharged July 30 1919, for fourteen years health officer of Lima, died near Jackson Center, Ohio July 25, from angina pectoris

⊕ Indicates Fellow of the American Medical Association

Lynn Ransom Palmer, New York City, Columbia University College of Physicians and Surgeons, New York City, 1903, aged 40, a member of the Medical Society of the State of New York, died at Old Forge, N Y, July 23, from tuberculosis

Laura Ann Cleophas Hughes, Boston, Tufts College Medical School, Boston 1895, aged 60 a member of the Massachusetts Medical Society, a specialist in public health, died in the House of the Good Samaritan, Roxbury, Boston, July 30

Howard Lankester, St Paul (license Minnesota State Board of Medical Examiners 1883), aged 74, commissioner of health of St Paul from 1910 to 1914, died in Columbia Hospital, Milwaukee July 30 from diabetes

Carey M Klyne, Youngstown Ohio, Eclectic Medical Institute Cincinnati, 1894, aged 48, for two terms coroner of Mahoning County, was drowned while bathing at Milton Lake near Youngstown, July 25

Harvey Vickard Murray, Honolulu Hawaii, University of the City of New York, 1891, aged 53, a member and once president of the Medical Society of Hawaii, died in San Francisco, recently

Thomas Jackson Charlton ⊕ Savannah, Ga, Bellevue Hospital Medical College 1885, aged 56, for many years superintendent of the Savannah Hospital, died July 25

James S Bell, Oak Park Ill, Homeopathic Medical College of the State of New York New York City, 1866, aged 79, died, August 8, from senile debility

Arthur Birch Lockridge, Danville, Ill, Indiana Medical College Indianapolis 1906, aged 41, died at the home of his parents in Greencastle, Ind, August 1

Isadore Mayor Joseph Kane, Chicago, Loyola University, Chicago 1920, aged 29, died in Mercy Hospital, Chicago, August 1 from general peritonitis

Maria Brown Averill, San Diego Calif, Hahnemann Medical College of the Pacific San Francisco, 1889, aged 85, also a pharmacist, died July 7

Benjamin M Sherwood, Bicknell, Ind, Missouri Medical College St Louis 1889, aged 64, died in St Vincent's Hospital Indianapolis, July 29

William Francis Farmer, Tewkesbury, Mass, Harvard University, Medical School, 1905, aged 35, died, June 5, from intestinal tuberculosis

Thomas D Aydelotte, Lyons, Ind, University of Louisville Ky 1888, aged 82, a practitioner for fifty-five years, died about July 30

James J Concannon, New York City, College of Physicians and Surgeons in the City of New York 1890, aged 64, died, August 1

George Phillip Rodemich, Millstadt, Ill, Barnes Medical College St Louis, 1908, aged 47, died June 12, from nephritis

Romulus Culver Biggs, Greenup, Ky, Bellevue Hospital Medical College 1868, aged 76, died, May 22, from arteriosclerosis

Moses Chappell Heath, Richmond, Ky, Bellevue Hospital Medical College 1871, aged 75, died in Stamford, Ky, July 27

William J Young ⊕ Fairfax S C, University of Maryland Baltimore, 1872, aged 69, died, July 25 from heart disease

Julius C Fitch, Hastings Minn, Rush Medical College, 1866 aged 79, a veteran of the Civil War, died, July 23

John Frank Peterman, Lebanon Pa Hahnemann Medical College Philadelphia 1886, died, July 25, from pneumonia

Isaac W Finley, Guthrie Okla, Meharry Medical College Nashville Tenn 1912, aged 32, died in Denver July 22

Ulrich Harder, St Louis Missouri Medical College, St Louis 1878 aged 74 died June 27, from myocarditis

Samuel Clymer Moyer, Lansdale Pa, Hahnemann Medical College Philadelphia 1872, aged 73 died August 4

James J Tillapaugh, Wolcott N Y, Baltimore University 1890 aged 63, died August 5 from heart disease

James H Roberts, Ehrhardt S C Medical College of South Carolina Charleston 1887, died July 18

Richard H Drewry, Brooks Ga Medical College of Georgia Augusta 1877 aged 67, died June 25

James K P Black, Sage Ark. University of Nashville, Tenn, 1877, aged 79, died, July 21

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VALUABLE METHOD OF EMPLOYING ARSPHENAMIN IN SYPHILIS *

OLIVER S ORMSBY, M D
CHICAGO

of the great problems of medicine today is the
l of syphilis Its control and restriction are the
onditions we can hope to strive for, as eradica-
not in the realm of human possibilities, owing
peculiar method of transmission The impor-
of the disease was emphasized during the recent
l War, when in spite of the enormous amount of
done to prevent its dissemination it has greatly
sed throughout the world In this country we
t likely to suffer the increase noted in Europe,
en here the disease will occupy a commanding
'or years to come In a recent communication,
le [1] stated that syphilis has vastly increased in
during the war Brocq and others agree that
nas been an increase, but not to the extent
by L redde The campaign of public education
ng venereal diseases, which began before the
nd was greatly augmented during that period,
- with measures being taken since these dis-
have become problems of public health, are
uting to the limitation of syphilis, but the
of its successful treatment is still of great
ance The rapid sterilization of persons likely to
nate the disease immediately shows results
'e many excellent clinics now established all
his country where persons are treated who are
n of the possibilities of the disease, good work
n done through the social service departments
l as otherwise in the modern management of the
-1

more than 400 years, mercury stood practi-
lone as the sheet anchor in the treatment of
ase, and it still holds an important position
list of remedial agents have arisen, been tried
ndoned, always in favor of mercury The one
hat has successfully vied with mercury is ars-
min, and after ten years of employment its
ance is universally recognized The two
that have stood in its way have been the diffi-
attending its administration and its possible
s The former apparently cannot be overcome
a fairly serious matter, as syphilis occurs every-
and not all physicians can equip themselves
properly, nor do they care to undertake to acquire
the technical skill required for its proper administra-
tion While individually each of these sees only a
limited number of patients so infected, yet, in the
aggregate it amounts to a large number In the
larger centers of population this difficulty does not
apply, as a sufficient number of qualified men can be
found to do the work successfully, and within a rea-
sonable time, through education of the younger men
this factor will be overcome The second condition,
that of the dangers attending its employment, has
been so far reduced through improvement in technic
of administration and manufacture of the drug that
the dangers attending its employment have been so
far reduced that it is likely that if statistics were
available the untoward results of arsphenamin would
be found to be no greater than those of mercury

The early hope of a single dose eradicating the
disease was soon shattered but the marked effect
of the drug on the disease compelled its continuance
and intensive work has been done all over the
world to devise the best method for its employment
That this problem is not solved is evident by a survey
of the diverse methods now in use In its earlier days,
arsphenamin was administered only once in two
weeks, with mercury in the interim, later, the interval
was reduced to ten days, and for some time before
the war most clinicians had been giving the injections
in a series of from five to eight or from five to seven
day intervals, combined with mercury This is practi-
cally the standard method used today, and was suc-
cessful in the American army

In 1916, Pollitzer [2] outlined a method he had
employed successfully and apparently without danger,
of using three injections of arsphenamin, each consist-
ing of 0 1 gm for from 25 to 30 pounds body weight,
on successive days, following this with eight weekly
injections of 2½ grains each of mercuric salicylate
Three series in a year were employed, with a rest
period of two months between the series This
method was founded on the scientific theory of
fractional sterilization as employed in the laboratory
The principle is alluring, as it includes a concentrated
attack on the micro-organisms in such a manner that
their development between treatments is not possible
to any degree From clinical experience it is evident
that a single injection of a size compatible with safety
cannot destroy all of the spirochetes present, and
when the interval is prolonged between injections, the
remaining micro-organisms reproduce so that it is
possible that almost, if not quite, as many are present
at the second injection as at the first, so that other
factors would necessarily have to intervene before the

an s address read before the Section on Dermatology and at the Seventy First Annual Session of the American Association New Orleans April 1920

1 de Bull Soc franç de dermat et de syph 1919 p 1

2 Pollitzer Sigmund The Principles of the Treatment of Syphilis J Cutan Dis 34 633 (Sept) 1916

infection is overcome In this method it is supposed that at the first injection the major portion of the micro-organisms are destroyed, and as the second injection follows so soon, many of those remaining are overcome and the few that escape this are reached with the third That this is not literally true is evident, but the fact remains that many patients thus treated early do not show further signs of the disease The possible dangers attending this method were discussed by many, but most observers agree that if it were safe it offered possibilities more promising than other methods

Late in 1916, I began using arsphenamin in selected cases at first, and later in practically all by a similar procedure I found that the clinical and serologic results were practically the same when an interval of one day was allowed between the injections, and the few patients who felt somewhat depressed by the treatment when given daily were able to take it every second day without discomfort

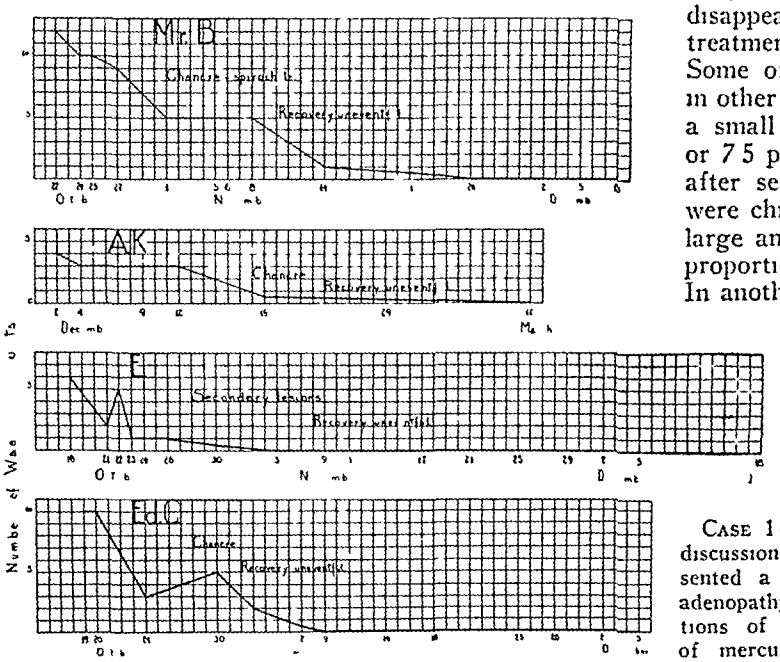

Chart 1—Wassermann curve in four patients treated by the method described in this paper no clinical relapses Routine treatment first day 0 2 gm arsphenamin third day 0 4 gm arsphenamin fifth day 0 4 gm arsphenamin twenty mercury injections, arsphenamin injections repeated

TECHNIC

In the early stage, before generalization has occurred, three injections of arsphenamin are given with an interval of one day between the injections The average dose is 0 4 gm , but in some instances 0 5 or 0 6 gm are given when the patient is large and vigorous In patients not previously treated, the first dose is never more than 0 2 gm Following this, one month's treatment with mercury, either by injection or inunction, is employed Six weeks from the last arsphenamin injection, three more are given It appears important to give the second series in six weeks, as at that time the Wassermann reaction is apt to be negative and is more likely to remain so if treatment is then employed If two or more months elapse before the second series, a Wassermann relapse is probable In well developed cases not previously treated, the same procedure is employed, except that after the second series of arsphenamin twelve injections of mercuric salicylate are given at weekly intervals, or their equivalent in inunctions over a period of three months, when a third series of arsphenamin is given as before, this being followed by another three months of mercury In the second year two series of treatments are given in the Wassermann negative cases as a prophylactic measure In the Wassermann positive cases the procedure is as outlined for the first year

RESULTS

In a series of 160 private cases these results were noted after from two to five courses had been given Sixty, or 37 5 per cent , remained clinically well and Wassermann negative as tested for periods varying from one to three years , thirty-six, or 22 5 per cent were identical with the foregoing except that they were watched only for a period of from six to nine months after finishing the treatment There has been no opportunity for testing these cases further Fifty-*two, or 32 5 per cent , I class as doubtful, as they* disappeared after receiving two or more periods of treatment, and I have not made subsequent tests Some of these have been reported from colleagues in other cities as remaining negative It is likely that a small proportion are serologically free Twelve, or 7 5 per cent , failed to respond serologically even after several periods of treatment The 160 cases were chiefly late and latent, and all had had quite a large amount of treatment previously, only a small proportion were active or so-called secondary cases In another small group seen and treated in the early chancre stage, before the Wassermann test became positive, 100 per cent were apparently entirely relieved Some of these have presented negative findings for over two years Three case records are of sufficient interest to note

REPORT OF CASES

CASE 1—This illustrates the value of the method under discussion The patient was first seen in 1914 and then presented a primary lesion of five weeks' duration, general adenopathy and a positive Wassermann reaction Two injections of arsphenamin followed by twenty-two injections of mercuric salicylate composed his first course Clinically the patient was then and has since remained well. Thirty and sixty days after the termination of this period, the Wassermann reaction was positive Then three injections of arsphenamin and twenty of mercuric salicylate were given The Wassermann reaction was still positive at the expiration of thirty and sixty days following this period, when a third course of treatment was given consisting of four injections of arsphenamin and twenty of mercury After a two months' rest, the Wassermann reaction still being completely positive, the patient was given two injections of arsphenamin on successive days, after which the Wassermann reaction was reduced to mildly positive, where it remained for three months This was late in 1916, and it was decided to employ the method described in this paper, but before the treatment was instituted, the blood findings were confirmed by Dr Stillians At this date the patient had been under treatment for more than two years, was clinically well but serologically positive, and had been given eleven injections of arsphenamin and sixty-three of mercury in addition to some internal treatment Three injections of arsphenamin on alternate days were now employed Three weeks later the Wassermann reaction was still positive but became negative in six weeks when a second series of three injections of arsphenamin were given In three months a third series of three injections were given, even though the test remained negative and six *months later a fourth series One and a half years* after this

series a provocative injection was given, which did not change the negative reaction During the last two years and nine months, eight tests have been made, the last one, April 10, 1920, all of which have been negative

CASE 2.—This illustrates the reversal of the Wassermann reaction after it had been persistently *positive* under *long-continued* treatment, chiefly mercurial The patient was first seen in 1910 and presented a syphilitic glossitis and a positive Wassermann reaction For one and a half years, mercury and potassium iodid were administered, together with local treatment During the next five years, nine injections of arsphenamin and seventy-one injections of mercury were given in courses, in addition, potassium iodid and mercurial inunctions were employed Early in 1917, one period of arsphenamin, consisting of three injections given on alternate days reversed the reaction and it has been negative since the last being made two years and eight months after this treatment

CASE 3.—This illustrates a delayed development of symptoms The patient was seen in October 1916 when he presented a typical primary lesion of twenty one days' duration No spirochetes were demonstrable, as calomel had been used as a local application There was beginning inguinal adenopathy, and the Wassermann reaction was negative Four injections of arsphenamin at ten day intervals together with ten injections of mercury, composed a period of treatment lasting two months The Wassermann reaction was negative at the end of the third fourth and fifth month At the end of the sixth month a generalized maculopapular eruption of syphilis developed, and coincidentally the Wassermann reaction became *positive for the first time* During the following three months five injections of arsphenamin and twenty of mercury were employed after which the Wassermann reaction became negative During the following two and a half years nine injections of arsphenamin and much mercury had been employed and the patient had remained clinically free and Wassermann negative

STUDIES AT RUSH MEDICAL COLLEGE

In a group of 258 cases treated at Rush Medical College by Dr Shafer, in which the method outlined above was adhered to, 110, or 42 per cent, responded to three courses or less, while 148 failed to respond and required more treatment Of the 258, twenty-one were primary, and of these, twenty, or 95 per cent, responded to three courses or less Of the total number, 104 were early secondary, of which fifty or 40 3 per cent, responded, 134 were late and latent, of which forty, or 29 9 per cent, responded Of the 110 recorded as responding to the treatment, forty-two were negative from six to twelve months after treatment, and sixty-two less than six months A sufficient time, therefore, had not elapsed to make definite statements as to the ultimate results Judging from the history of the forty-two cases remaining negative, it seems likely that in a year a majority of the sixty-two will show similar results

In order to determine, if possible, the effect of different sized doses and varying intervals, several groups of cases have been studied at the clinic at Rush Medical College Quantitative Wassermann tests have been made in these cases by Dr Retinger, and the treatment has been administered by Dr Shafer As this study is now in progress, only a few observations are permissible here The technic of the Wassermann work was conducted in such a way in the series of experiments as to determine the smallest quantity of the patient's serum which was able completely and exactly to deviate one unit of complement in the presence of the optimum quantity of a standard antigen, the same antigen being used through the series and proved to retain its optimum within the same limits of dilution during the whole period of time

Ten complete reports are included here In four, the method described in this paper was employed and all the patients made rapid and good recoveries In a series of six patients, two were given 0 1 gm every second day, one was given the same size dose daily, two were given 0 15 gm every second day and one 0 15 gm every third day, all over a period of from two to four months Five of the six developed symptoms of the disorder while under treatment This method, therefore, of giving small but frequent doses was soon abandoned It was interesting to note from the Wassermann standpoint that the curve falls *during the first five days of treatment, and rises again* to reach a high point at the seventh to tenth day when it begins again to fall slowly until a negative test is reached The development of symptoms was not accompanied by any marked change in the appearance of the Wassermann curve

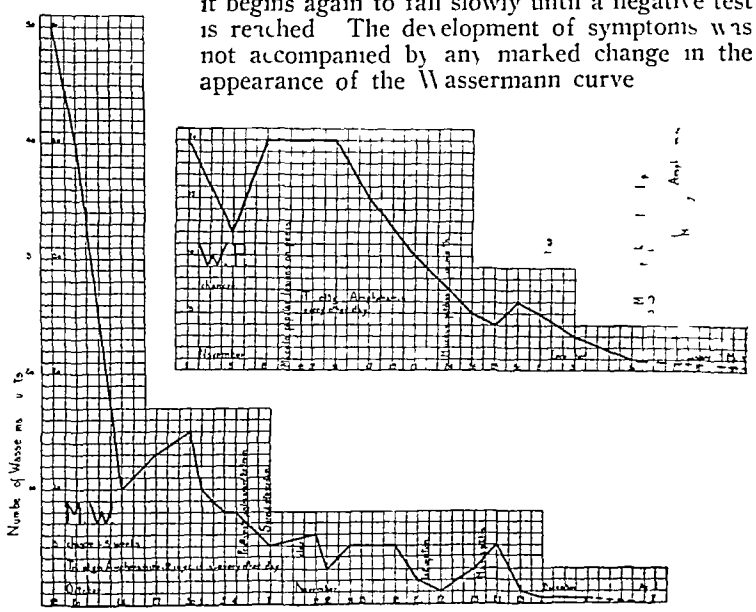

Chart 2.—Wassermann curves of two patients treated with small doses of arsphenamin at short intervals with date and character of clinical relapses

PUBLISHED REPORTS OF OTHER METHODS

It cannot be proved statistically that the method described in this paper gives a greater number of negative cases clinically and serologically than other methods, as statistics are not available It appeared successful to us, as a large proportion of the cases recorded here had *not* responded to other methods and did respond when treated in this manner In a communication on the abortive treatment of syphilis, Altman [3] has given the statistical results of the treatment of 300 chancres in which a portion received two to three injections of arsphenamin in a dosage of 0 4 to 0 5 gm, combined with intramuscular injections of mercury, and later four to six injections of arsphenamin together with eight to twelve injections of mercuric salicylate Of the 300 cases, eighty-one were under observation from one to four years, and of these, 95 per cent were clinically and serologically cured In his review of other workers, the percentage of cures in similar cases varied from eighty-seven to 100

3 Altman Dermat Ztschr 23 257 (May) 1916

In a recent contribution, Gibson[4] recorded the results of treatment in two series of patients In the first series, consisting of eighty-nine, he gave what he termed a concentrated course This consisted of weekly injections of the kharsivan brand of arsphenamin in a dosage of 0 6 gm , except the first dose, which was 0 3 gm , and continued the injections until 2 7 gm had been given The interval between the third and fourth injections was two weeks in place of one The entire course lasted from five to six weeks If the Wassermann reaction remained positive after this course, potassium iodid was given for two weeks, when two more injections of kharsivan were given at weekly intervals With this method, 52 80 per cent became negative with 3 gm , and 15 73 per cent with 4 gm , while 25 84 per cent remained positive after 4 gm and 5 61 per cent were doubtful after 4 gm In 100 cases treated with what he termed "a prolonged course," the results recorded were given as 68 per cent negative after 3 gm , 38 per cent after 4 gm , and only 4 per cent were positive after 4 gm This course consisted of three injections each of 0 3 gm , then two of 0 4 gm , and two of 0 5 gm , at weekly intervals except between the third and fourth injections, when a two week interval was allowed The entire course required eight weeks for its completion The criterion of cure in these series was a negative Wassermann reaction As it was impossible to follow the cases, no figures were given as to recurrence or end-results

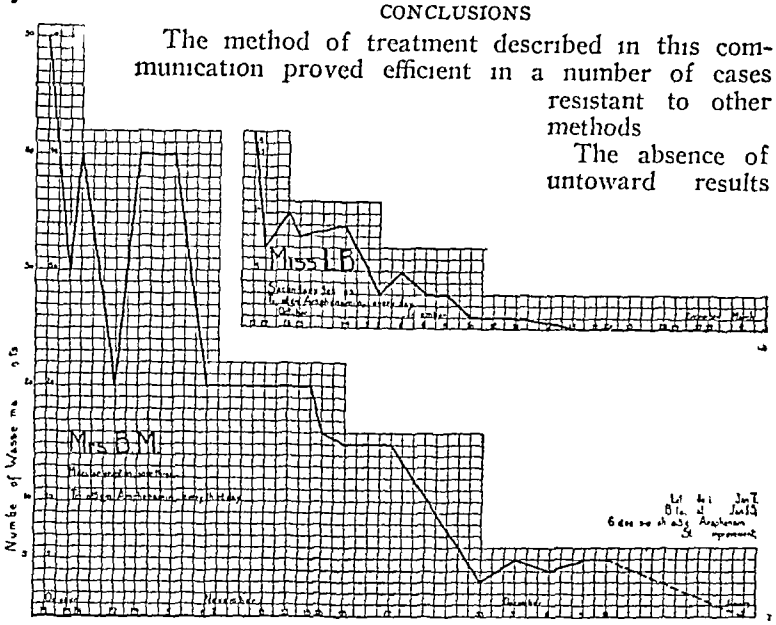

Chart 4 —Wassermann curves of two patients treated with small doses of arsphenamin at short intervals with date and character of clinical relapse in one

IMPORTANCE OF EARLY TREATMENT

From the results obtained in early cases and those obtained in later ones, as recorded in this paper, the fact is emphasized that the time to treat syphilis is in its beginning Unfortunately, the major portion of our cases were first seen in the later stages, when its eradication is most difficult The study of our records strongly impresses the fact that it is essential to disseminate the information that a venereal sore, no matter how insignificant in appearance, should be examined by a competent man and never treated in any manner until its nature is demonstrated by a microscopic examination If all druggests would refrain from prescribing for such lesions, and all physicians not equipped to make the proper examination microscopically would see to it that the patient was directed immediately to a place where such examination could be made, the prevalence of syphilis would be greatly reduced

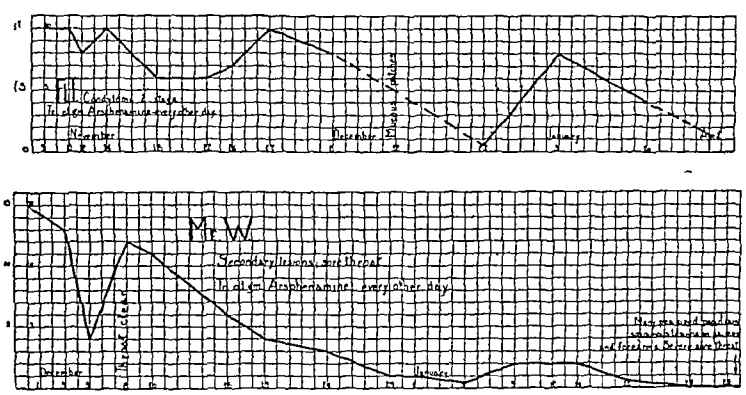

Chart 3 —Wassermann curves of two patients treated with small doses of arsphenamin at short intervals with date and character of clinical relapses

CONCLUSIONS

The method of treatment described in this communication proved efficient in a number of cases resistant to other methods

The absence of untoward results and reactions of any moment in the large number treated makes it appear as safe as other methods

The percentage of cases remaining Wassermann negative and clinically free over a period of from one to three years is not large, as many of the patients, after having two or three negative tests over a period of from six to nine months after the termination of treatment, have not since reported for examination

A comparison with results from other methods cannot be made, owing to lack of extended reports of cases treated by other methods, the major portion only having been watched for less than one year

Several reports are available of cases treated in the chancre stage, and they are similar to ours in end-results

It appears evident from experimental work herein reported that frequently repeated small doses, that is from 0 1 to 0 5 gm , are inefficient The combined use of arsphenamin and hydrargyrum in periods either as herein described, or by the method commonly employed today in which arsphenamin is administered every five to seven days in periods of five to eight injections, appears at present to be the method of choice

The promptness with which many patients become clinically free and Wassermann negative, often with a single course, is encouraging, but should not lead to the conclusion that the disease is eradicated, as Wassermann relapses occur from six months to a year or more after having been continuously negative in the interim It is therefore necessary to continue treatment for from one to two years, even though it may seem superfluous in some cases

4 Gibson H E Brit M J 1 114 (Jan 24) 1920

The length of time that a Wassermann positive should be treated, and the amount of treatment that should be given, cannot be stated When a patient is clinically well and has been for years, and has had a large amount of treatment without permanently affecting the blood reaction, it is difficult to say how far we are justified in pushing treatment In certain of these a spinal fluid examination reveals findings that are significant, in many it does not

Finally, it can safely be stated that with arsphenamin and mercury together we have a method of combating syphilis that is better than any method previously employed, and until more efficient drugs are found these should be used at the earliest possible moment, and continued a sufficient length of time to eradicate the disease, or demonstrate the inability of the drugs to accomplish this result

25 East Washington Street

PENETRATION OF THE INTESTINE BY ENDAMEBA HISTOLYTICA*

KENNETH M LYNCH, M D
CHARLESTON, S C

As a contribution to the pathology of amebic dysentery, I present certain observations that have been made during the examination of several cases in my necropsy service The particular point on which these observations bear is the means by which the ameba gains entrance to the tissues of the wall of the intestine Since this question appears still to be unsettled, it is thought that the apparently clear trail of *Endameba histolytica* into and through the wall of the intestine in these typical chronic cases is worthy of study

Fig 1—Nests of amebas in crypts epithelial destruction beginning penetration

In the first place, there is encountered no evidence that the ameba passes through the surface of the mucosa even though there may be large denuded areas where the epithelial covering has been lost The ameba is not seen within the first part of the mucosa, and except at the edges of ulcers is not seen within the mucosal tissues above the base of the gland crypts, save the occasional straggler

One does see, however, a marked invasion into the glands In this there may be seen individual cells that have penetrated to the bottom of glands in which the epithelium remains intact and in good condition,

Fig 2—Nests of amebas in crypts epithelial destruction penetration and migration

but what is more significant is the common accumulation of amebas, groups of three or four or as many as seven or eight in the bottom of crypts in which the epithelium has been partially or wholly destroyed The common picture is that of several amebas hugging the basement of a crypt surrounded by some granular detritus which appears to be remnants of decomposed epithelium, the lining of the crypt at this place being lost but the epithelium of the neck of the gland partially or wholly intact (Fig 1)

The next development appears to be a migration of amebas from this nest through the basement of the gland, into and through the intervening tissues and muscularis and on into the submucosa One may actually see the cell fixed in the act of penetrating from the crypt and on into the tissues below (Figs 1 and 2)

When this nest of amebas and this port of entry has been established, there occurs a fairly wide migration for a considerable radius in all directions except toward the lumen of the intestine There occurs a thrombosis of blood vessels of submucosa or muscularis (Fig 3) and a necrosis of the tissues above with the development of the ulcer leading to the surface The characteristic wandering of the cells downward and laterally and not into the mucosa is apparently responsible for the extension of the ulceration beneath the mucosa with the production of the undermining so peculiar to this infection

Large numbers of amebas accumulate with an ever widening field of operation in the submucosal tissues beneath these ports of entry, and their accumulation is attended by a low grade inflammatory reaction in which there is an edema, a collection of lymphocy and some fixed tissue proliferation (F gling members of the colony wand

* From the Department of Pathology of the Medical College of the State of South Carolina
* Read before the Section on Pathology and Physiology at the Seventy First Annual Session of the American Medical Association New Orleans Apr l 920

when not in force seem to create little disturbance In numbers they are most active in the submucosa, but may invade the muscular coats and may even pass through the wall and into surrounding parts

This series of events appears to constitute the real pathology of amebic intestinal infection as seen in these cases

Now, while in the main the ulcers do not go beyond the submucosa, the process may extend through the wall, and, in several long standing cases I have encountered, as a sequel to this, a characteristic ramifying abdominal abscess formation which I have not seen described in detail

There was one case (Path 169-14 84) in which the whole large intestine was riddled with ulcers of various stages, and the process had extended for a short distance above the ileocecal valve There were two complete erosions of the colon, one of the transverse colon and one of the first part of the descending colon There were old, dense, fibrous adhesions binding the viscera of these localities together into an almost inseparable mass

From the erosion of the transverse colon a large abscess, containing pus with a distinct hydrogen sulphid odor, ran in a tortuous course behind the peritoneum, through the retro-abdominal tissues to the right and over to the root of the liver, where the foramen of Winslow was closed by adhesions There was a large amebic abscess without any evidence of bacterial infection in the liver just over the retroperitoneal

Fig 3—Ameba migration thrombosis and early ulceration

abscess the two not being continuous but there being adhesions between

From the erosion of the descending colon a similar tortuous abscess ran up to and involved the lower half of the spleen, the course being transperitoneal and walled off by fibrous tissue, and downward behind the peritoneum into the pelvis

Sections from various parts of the tracts of these abscesses show a granulation tissue wall with surface

Fig 4—Extension of ulcer amebic penetration and infiltration of submucosa reaction in submucosa

necrosis and pus formation In this necrotic surface no amebas may be found, but they are encountered at several places in the loose tissues beyond the active inflammation, a characteristic of amebic abscess and ulcer Always they are the vanguard, the destruction taking place behind them

This abscess development must be considered along with the extension of the infection to the peritoneum, liver and lung, as an important complication of intestinal endamebiasis

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Compulsory Health Insurance —The *Medizinische Klinik* reproduces the communications that have been published in THE JOURNAL on the subject of compulsory state health insurance and in American journals and chamber of commerce reports, etc, the Berlin journal adding editorial comment as follows 'We must admit that these American expressions of opinion portray with sharpness and one-sidedness but not without a certain justification the influence which compulsory state health insurance and the legislation in regard to it, in Germany, has had on the practice of medicine and which they continue to exert along the same lines so that the representatives of a free profession are being forced into the position of paid public servants It is interesting for the German physician to read these antagonistic views of the American profession in the matter It remains to be seen whether America will succeed in finding a way to solve the problem of protecting against sickness and caring for the sick without introducing the dreaded German system' of compulsory health insurance. The contracts with the sickness insurance companies in Germany expire July 1, and the Leipzig League is conducting negotiations for renewal The representatives of the former left the room when the fee of 12 M per visit and 8 M per office call was suggested by the League. Recent proposals to enlarge the scope of state insurance had a tendency to eliminate private practice almost entirely

PNEUMOPERITONEAL ROENTGEN-RAY DIAGNOSIS *

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AND
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A quarter of a century has not yet elapsed since the discovery of the roentgen ray, but during this relatively short interval the adaptation of roentgenography to diagnostic purposes has rapidly progressed and many new fields of investigation have been opened up After a period characterized by many additions to and improvements on the apparatus and technic, an entirely new combined method of diagnosis has been found which assists the roentgen ray in the revelation of obscure diseased conditions by the inflation of body cavities with air or gas, thereby increasing to an extent hitherto unobtainable its scope and diagnostic efficiency Experience with this procedure, although as yet necessarily brief, would appear to justify the statement that its adoption already means a great step forward, and will probably come to be regarded as an epochal advance in diagnostic roentgenology

The development of this method has already been shortly outlined by us in a preliminary report [1] Since our adoption of this promising method in the spring of 1919, we have endeavored by improving on the technic to show distinctly the parenchymatous organs

Fig 1 (patient referred by Dr J F Connors)—Details of the abdominal organs in a child aged 7 years *A* liver *B B* diaphragms *C* heart *D* spleen, *E* coils of small intestine

themselves and their mutual relations, as well as pathologic changes of these organs and our experience with the application of this method of abdominal inflation to roentgenographic purposes has yielded very satisfactory results, and has more than justified our expectations as to its diagnostic value The procedure has been utilized by us in eighty cases, and

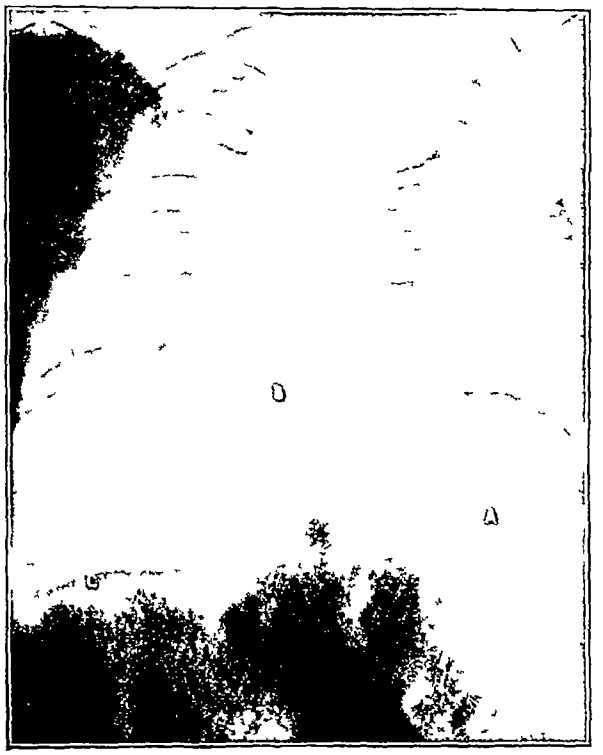

Fig 2 (patient referred by Dr Willy Meyer)—This roentgenogram taken without oxygen inflation shows a circular tumor in the lower portion of left chest Question Is the diaphragm above or below the tumor? *A* tumor, *B* heart *C* right diaphragm

without untoward effects The list includes patients varying in age from 4 to 74 years The feasibility of the method with children is well shown by a recent diagnostic inflation of a 9 year old boy with a possible indefinite right-sided mass in the region of the diaphragm, two weeks after the performance of an appendectomy The inflation was accomplished without the slightest difficulty and with no pain whatever to the patient, and it proved that no subdiaphragmatic condition was present The patient left the hospital cured, three weeks after the operation

We believe that the method should be reserved for those obscure cases in which a clearer outline than that which can be secured under the ordinary roentgenographic arrangements is desired

TECHNIC

Since our last publication on this subject we have further simplified the application of this method and by so doing have added to its safety, simplicity and efficiency Practically the only accessories now required are the lumbar puncture needle, rubber tube and oxygen tank In this respect we are in accordance with Rautenberg [2] who, in his latest contribution to this subject, has further simplified the technic of the method, the implements mentioned above being all that he now requires in its application

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Stein Arthur and Stewart W H Ann Surg 70 95 (July) 1919 Am J Roentgenol N S 6 533 (Nov) 1919

2 Rautenberg E Pneumoperitoneale Roentgendiagnostik Deutsch med Wchnschr 45 203 (Feb 20) 1919 Neues zur Roentgenologie der Leber ibid 46 123 (Jan 29) 1920

The lumbar puncture needle and the rubber tube are thoroughly sterilized The tube is then connected with the oxygen tank and the apparatus is ready for application

The patient is prepared for this procedure as for any roentgen-ray examination by a thorough cleaning

Fig 3 (same patient as in Figure 2 inflated with oxygen) — diaphragm is below the tumor Roentgen diagnosis cyst of lung operative diagnosis tuberculous cyst of lung *A* tumor *B*, heart, *C* right diaphragm *D* liver, *E* left diaphragm, *G* spleen

out of the bowels and emptying of the bladder just before inflation We have also found it advisable to administer one-sixth grain of morphin half an hour before pneumoperitoneum is established

The usual point at which the needle is to be inserted is about one to two finger breadths below the umbilicus in the median line The skin in this vicinity is thoroughly cleaned with tincture of iodin Existing scars are to be avoided when inserting the needle, and that location should be selected where it is reasonable to expect that no adhesions will be encountered

We have found that a local anesthetic before introduction of the needle is entirely unnecessary Merely taking a fold of the skin tightly between the fingers is sufficient to counteract any pain on introduction of the needle

The needle should be slowly inserted as far as the fascia, the thickness of the abdominal wall being easily gaged by any surgeon A very gentle pressure will then ease the needle through the fascia and peritoneum into the abdominal cavity It is our custom to insert the needle always at a slightly oblique angle so that the point of the needle after entering the abdominal cavity remains as near to the parietal peritoneum as possible The free end of the rubber tube having been connected with the needle, the oxygen is then allowed to flow gently into the abdominal cavity The amount of gas varies from 2 to 4 liters according to individual conditions Observation of the patient's general condition will assist the surgeon to judge the fulness of the abdominal cavity We regard this method as strictly surgical and one that should be attempted only by one with surgical experience

The air or gas used in the application of this method does not necessarily need to be sterilized Rautenberg in his latest contribution [2] points out that the atmospheric air or oxygen which is introduced into the abdomen does not need to be filtered or sterilized, and Schmidt,[3] who in his application of the method uses ordinary unsterilized air, emphasizes the fact that such air never gives rise to the slightest infection or even irritation of the peritoneal cavity Our experience, based on eighty cases, fully confirms these statements

DANGERS

The whole method stands and falls with the question of any untoward effects or dangers that may be connected with it Experiments and our own practical experience have shown that the elasticity of the living intestine permits it to recede before a sharp intruding body such as a needle, and no trouble in this respect has ever been encountered by us The nonoccurrence of injuries when this method is used was demonstrated in Rautenberg's preliminary animal experimentation on guinea-pigs, nor were lesions of the omentum or small intestine demonstrable in a few patients who came to necropsy or operation some days after the

Fig 4 (patient referred by Dr Willy Meyer) —Cyst of liver proved at operation to be echinococcus cyst *A* liver *B* cyst, *C* stomach filled with barium *D* oxygen *E* descending colon

employment of this procedure We ourselves have looked for intestinal lesions in patients at the time of operation, but have invariably found the intestine unharmed The entire freedom from danger is also

3 Schmidt Adolf Ein neues Verfahren zur Roentgenuntersuchung der Bauchorgane Deutsch med Wchnschr 45 201 (Feb 20) 1919

emphasized by Alvarez [4] on the basis of personal experience

PAIN

We have noticed that about one third of our patients complain of marked pain in the shoulders following distention of the abdomen to its full capacity No

Fig 5 (patient referred by Dr Jacob Kaufmann) —Atrophic cirrhosis of liver *A* small contracted liver *B* oxygen

heart symptoms have accompanied the inflation except a slight rise in pulse Before using the deflation method, we found that occasionally the pain did not begin until late in the evening In this event, it is advisable to elevate the foot of the patient's bed in accordance with the principle that air always rises to the highest point, thereby confining the oxygen to the lower pelvis and reducing the pressure against the diaphragm If the deflation method is not used, the absorption of the gas within the abdominal cavity varies individually from several hours to a few days

That there is some discomfort to patients we do not deny However, we must refuse to accept as contraindicative to the method the slipshod application of it by physicians who are either too indifferent or too inexperienced to follow the technic carefully

DEFLATION

Of late, we have employed an extremely simple method to relieve the patient of any real or imaginary pain which might be connected with the procedure It is simply to deflate the abdomen after the roentgen-ray examination has been completed After the patient has been brought back to bed, the lumbar puncture needle is reinserted in the same manner as before, and the air is allowed to pass out through the needle This eliminates any possible discomfort to the patient, and adds distinctly to the simplicity of the method We have employed this procedure in all of our cases, to the full satisfaction of the patients and ourselves, since Feb 16, 1920 Tierney [5] has adopted a similar procedure

The need of careful technic with the adoption of strict aseptic precautions is illustrated by Hyman's [6] observation of a low grade peritonitis among his first patients We have had no similar experience, and in conformity with others who are utilizing the procedure we consider it entirely safe and devoid of danger when properly employed

ADVANTAGES OF PNEUMOPERITONEUM

The essential feature of the new method, aside from the introduction of a contrasting agent in the form of air or gas, consists in the resulting change in the position of the viscera in the distended abdominal cavity, the mass of intestinal coils in particular, which interfere with free inspection, being permitted to slip away as far as possible, regardless of whether the patient stands or is recumbent

This method of gas inflation of the abdominal cavity enables us at the present time to show all the parenchymatous organs which heretofore have not been rendered visible or plainly brought out on the roentgenogram We have shown the liver and, in many instances, pathologic enlargements and defor-

Fig 6 (patient referred by Dr Jacob Kaufmann) —Splenomegalia *A* enlarged spleen *B* liver *C* right kidney *D* left kidney *E* transverse colon filled with barium

mities of the gallbladder, and in several cases gallstones We believe, however, that even with the aid of oxygen inflation, it is difficult to detect many cases

4 Alvarez W C The Radiographic Study of the Abdominal Organs After Inflation of the Peritoneal Cavity California State J Med **18** 42 (Feb) 1920

5 Tierney J L Pneumoperitoneum J Missouri M A **27** 137 (April) 1920

6 Hyman A S Radiography in Artificial Pneumoperitoneum Med Rec **97** 100 (Jan 17) 1920

of cholelithiasis, especially when the gallstones are of the same density as the surrounding tissues

Fig 7 (patient referred by Drs Max Einhorn and Frederick Kammerer) —Roentgen diagnosis tumor behind stomach operative diagnosis, retroperitoneal tumor probably glandular inoperable *A*, tumor, *B*, left kidney, *C* spleen, *D*, liver, *E* coils of intestines

The different varieties of splenic enlargement have been beautifully shown The diaphragm and subdiaphragmatic spaces have been clearly outlined In

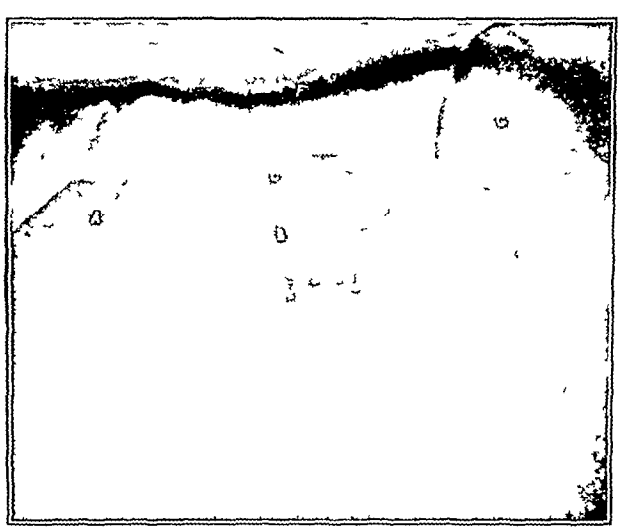

Fig 8 (patient referred to us by Dr F J Echeverria) Enlarged kidney hydronephrosis from kinked ureter (patient in lateral position) *A* liver *B* renal pelvis injected with thorium *C* outline of enlarged kidney *D* kink in ureter *E* oxygen *F* lateral abdominal wall *G* right ilium

many instances we were able to bring out the details of enlarged mesenteric glands, and in one or two cases the branches of the mesenteric artery were demonstrated

Cysts of the liver, prancreas and ovaries have been clearly shown, and malignancies involving the large and small intestine easily detected The female genital organs in their entirety, including tumors of those organs, have been visualized

Probably one of the most beautiful reproductions is the renal outline Pneumoperitoneum, when used in conjunction with pyelography, accurately outlines the renal pelves and calices, and at the same time shows with detail the renal structure, its enlargements and deformities

Changes of the vertebral column are also much more clearly revealed by this method than by the ordinary one One of the most valuable findings has been the actual demonstration of adhesions With special reference to adhesions, postoperative or the result of chronic inflammatory processes, we are inclined to believe, on the basis of personal findings,

Fig 9 (patient referred by Dr F J Echeverria) —Prolapse of right kidney with rotation *A* prolapsed and rotated kidney *B* right renal pelvis injected with thorium *C* opaque catheter in right ureter *D* liver *E* spleen *F* left kidney, *G* left renal pelvis injected with thorium *H* left ureter

that their existence involves no serious danger of perforating the intestine The clinical material at Harlem Hospital is rather abundant in this respect, and our list includes patients who have undergone three or even four laparotomies

CONTRAINDICATIONS

As to actual contraindications, the existence of acute abdominal conditions, such as acute appendicitis or peritonitis, naturally prohibits the employment of the method of abdominal inflation Nor should this procedure be carried out in known cases of valvular disease of the heart, for more work is required of this organ when the abdomen is inflated than under ordinary conditions Our experience has shown that a certain type of elderly persons, notably men who

have used alcohol in excess, does not readily lend itself to the employment of this method On the other hand, the average man, woman or child is a perfectly satisfactory subject and with the adoption of the deflation method described above, which will naturally follow as the method enters into more general practice, the performance of entirely painless inflations will soon become the rule

INDICATIONS

The indications for air inflation of the abdomen in connection with roentgenology have been slowly but considerably extended on the basis of growing experience as regards the harmlessness of the method and its wide sphere of usefulness Entirely new vistas have undoubtedly been opened up, and when the method is demonstrated it never fails to convey the impression of a new and promising domain in diagnosis At its present stage of development, however, the method should be reserved for the elucidation of diagnostic problems which have so far baffled the ingenuity of the clinician The roentgen-ray examination will in some of these cases reveal a distinctly surgical situation demanding operative interference for its relief In

Fig 10 (patient from Dr A Stein s service) —Postoperative adhesions *A* anterior abdominal wall *B* oxygen *C* adhesions

other instances many futile, inefficient or actually harmful operations will be abandoned on reception of the illuminating information furnished by the roentgen ray

The method should not be employed indiscriminately Its application should be reserved for suitable cases in which great advantage is seen to attend its adoption All new methods fall heir to the common fate of being held responsible for all accidents and untoward occurrences due to lack of practical experience In trained hands and with the employment of proper technic, there is every reason to anticipate the most gratifying results from this new adjuvant to abdominal diagnosis

48 East Seventy-Fourth Street—222 West Seventy-Ninth Street

ABSTRACT OF DISCUSSION

DR GEORGE E PFAHLER, Philadelphia In practically all instances we can demonstrate the lower border, sides and general outline of the spleen and liver by ordinary fluoroscopy or by plate methods But the pneumoperitoneal method is of a distinct advantage in demonstrating irregularities on the lower border of the liver, or on the right border of the spleen Its great advantage is in differentiating these dense shadows in the lower part of the chest from the solid tissues in the abdomen the liver or the spleen, also, in outlining any solid tumor enlarged glands or adhesions within the abdomen It seems to be safe When we have once eliminated the possibility of filling defects in the gastro-intestinal tract,

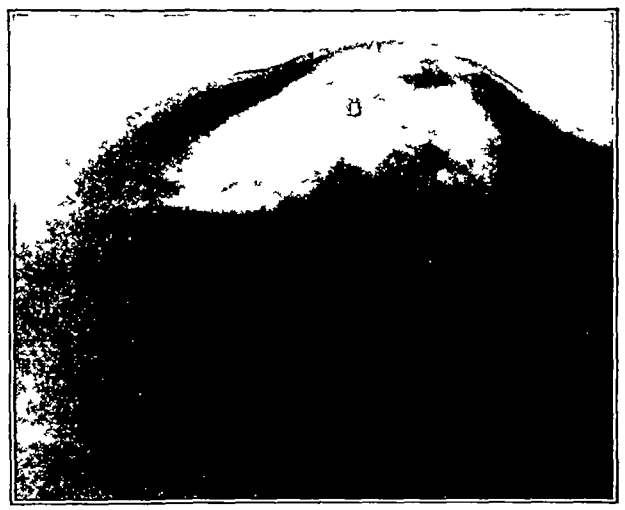

Fig 11 (patient referred by Dr I S Haynes) —Marked adhesions in large ventral hernia *A* thinned abdominal wall *B* intraperitoneal adhesions

and still must determine the pathology within the abdomen, this method is of distinct advantage What is done with the needle during the time that the patient is lying on the abdomen, and how is the air withdrawn from the abdomen later?

Fig 12 (patient from Dr A Stein s service)—*A* uterus *B* tumor of ovary *C* adhesions between uterus and ovary and between ovary and pelvic wall Operative findings cyst of ovary the size of a walnut omental adhesions between uterus and ovary and between ovary and pelvic wall

DR. B H ORNDOFF, Chicago I wish to draw a[tt]
to five points (1) Pneumoperitoneum the
value when used in the preparation of for
diagnostic investigation (2) Having

toneum more than four hundred times myself in connection with various pathologic conditions and without having a case where reaction of a serious character has been noted as the result of it, I am thoroughly convinced that when care is observed with regard to the technic of administration, it is a comparatively safe procedure (3) Pneumoperitoneum may be produced for therapeutic purposes, such as tuberculous peritonitis and other inflammatory conditions of the peritoneum, for the relief and prevention of peritoneal adhesions and in conjunction with radiotherapy, etc (4) For diagnostic purposes, pneumoperitoneum facilitates greatly the study of the abdominal viscera by means of the roentgen-rays (5) The necessity for special equipment designed to meet the requirements of a careful and complete study of the abdominal organs after pneumoperitoneum has been produced

DR WILLIAM H STEWART, New York Dr Pfahler mentioned the importance of this method of diagnosis only in those cases in which the information cannot be obtained by ordinary means This point cannot be emphasized too

Fig 13 (patient from Dr A Stein's service)—Uterine myoma with double (old) pyosalpinx *A* large myomatous uterus *B* right and left pyosalpinx (roentgen ray diagnosis confirmed at operation)

strongly By deflation we mean a reinsertion of the needle, after the roentgen-ray examination has been completed, for the purpose of drawing off the gas from the peritoneal cavity The needle is not left in situ after inflation on account of the damage that might be done to the viscera during the change of posture necessary in making the roentgen-ray examination Deflation relieves the tension and pain when present to such an extent that we now have hopes of making the method an office procedure We still insist that simplicity of the apparatus is essential Dr Rothenberg, one of the very early workers with this method, has now discarded filtration or sterilization of the gas as well as the use of any apparatus for measuring the pressure If one has the proper surgical experience there will be no difficulty in reaching the peritoneal cavity, we have never felt the necessity of injecting salt solution to ascertain this fact Our successful examination of eighty cases without a fatality occurring, is largely due to the simplicity of the method

SQUAMOUS CELL CARCINOMA OF THE KIDNEY

REPORT OF A CASE OCCURRING IN A HORSESHOE KIDNEY COMPLICATED BY A CALCULOUS PYONEPHROSIS *

ALEXANDER PRIMROSE, CB, MB, CM (EDIN)
Professor of Clinical Surgery, University of Toronto Faculty of Medicine, Surgeon Toronto General Hospital
TORONTO, ONT

Primary cancer of the kidney is not of frequent occurrence This is particularly true if we exclude hypernephroma, which in the literature of the past has frequently been described as a carcinoma of renal origin, but which most authorities now believe to be derived from suprarenal rests as first suggested by Grawitz Accepting this theory regarding the origin of hypernephromas as correct, we may state that a primary cancer originating in kidney tissue is derived from the epithelium of the renal tubules

The occurrence of a squamous cell carcinoma in the kidney is excessively rare, and it becomes a subject not only of interest but of considerable practical value to trace its origin and to study the etiologic factors which lead to its production Kundrat [1] described the condition in 1891 A perusal of the literature leaves no doubt in one's mind that such tumors arise from the transitional epithelium of the renal pelvis We may accept the classification of Graupner,[2] who, in studing the histogenesis of primary renal cancers, divided them into two groups (1) infiltration carcinoma, and (2) adenocarcinoma The former are derived from the renal pelvis primarily, and the latter from the renal tubules

The case herewith recorded is of further interest because it was associated with a calculous pyelitis The presence of stone in the kidney plays an important role in the production of cancer, thus, in the Mayo Clinic not less than 50 per cent of all cases of epithelial cancer of the kidney which have come to operation were superimposed on extensive renal calculous formation In addition, my patient exhibited the unusual anomaly of a horseshoe kidney, a condition which, according to Adami,[3] is present in 0 4 per cent of necropsies

REPORT OF CASE

Examination—Mrs F J S, aged 58, came to me in January, 1919, complaining of pain in the back and right side She stated that since early childhood, or as long as she could remember, she had had some distress in that region She had an abdominal tumor visible to the eye Its most prominent portion was behind the right rectus muscle, below and to the right of the navel It could be palpated through to the loin, there was dulness in the flank and resonance on percussion over the outer portion of the tumor There was also a definite projection of the tumor across the middle line to the left side, extending fully 7 cm to the left of the linea alba Percussion over this part of the tumor elicited resonance An area of resonance existed above, between the tumor and the liver One could detect fluctuation through the tumor from the anterior portion back to the loin The patient had some slight evening elevation of temperature, and she had lost 20 pounds in weight

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association, New Orleans April 1920

1 Kundrat Wien klin Wchnschr 4 949 1891

2 Graupner R Zur Histogenesis des primaren Nierencarcinoms Beitr z path Anat u z allg Path (Ziegler's) 24 399 1898

3 Adami J G and Nicholls A G The Principles of Pathology Ed 2 Philadelphia, Lea and Febiger 2 728 1909

My colleague Dr W W Jones, made a cystoscopic examination and found the bladder healthy in appearance Urine flowed freely from the left ureter and proved to be normal on analysis The phenolsulphonephthalein test came through in six minutes The catheter passed into the right ureter more than half an inch There was absolutely no flow of urine from the right ureteral orifice The roentgenogram showed a stone about the size of a filbert in the center of the tumor behind the outer part of the right rectus muscle A second shadow of a stone, somewhat larger, was seen in the middle line or slightly to the left of the middle line

Operation and Results—Jan 13, 1919, an oblique incision was made over the anterior surface of the tumor When the peritoneum was opened the tumor was found to be retroperitoneal and to extend across the spinal column into the left lumbar region Its main bulk, however, was to the right of the spine, where it lay in the right lumbar space as an elastic mass obviously containing fluid A very careful inspection was then made of the entire tumor It consisted of two portions, one occupying each lumbar region and connected by a broad thick bridge of tissue The bridge was so thick and broad that there was little differentiation between it and the two masses which it connected The left lumbar region was carefully explored to make certain that there was no further evidence of a left kidney behind It became obvious that we were dealing with a horseshoe kidney I then incised the posterior parietal peritoneum over the face of the cyst to the right of the ascending colon, after which I marsupialized this by uniting with suture the margins of the incision in the posterior peritoneum to that in the anterior peritoneum Thus the general peritoneal cavity was completely closed off from the field of operation I cut through a further covering of the cyst consisting of the fatty capsule which was about 2 mm in thickness I inserted a large trocar and drew off yellow purulent looking material which was watery in consistency I then incised the cyst I found a mulberry calculus about the size of a filbert lying free in the cyst cavity I explored the interior of the cyst with my finger and discovered another stone projecting into the cyst cavity from a solid part of the tumor which lay anterior to the spine Thus was fixed in position While attempting to mobilize this with my finger I fractured a piece from a portion which lay still deeper and which I could not dislodge The patient was a poor operative risk and I desisted from any further extensive operative interference I dissected out a considerable portion of the cyst wall, including a thickened band of tissue which lay across it obliquely The remaining portion of the cyst wall was uniformly about 3 mm in thickness I overcast the cut edge of the cyst wall with catgut for hemostatic purposes and inserted a drainage tube before closing the wound During the operation I found on the outer surface of part of the cyst wall an area about 2 cm. in diameter and raised from the surrounding surface for about 3 mm This was yellowish gray, and possessed a tubercular surface During the operation, 40 ounces of physiologic sodium chlorid solution were administered interstitially The fluid content of the cyst was analyzed by Professor Hunter, who reported "The fluid had a specific gravity of 1 010 and a faintly alkaline reaction It contained traces of urea and other urinary constituents, but its chief soluble component was protein The total quantity of this present was 1 75 per cent It was partly nucleoprotein, but chiefly coagulable protein (albumin)"

Subsequent to the operation drainage was maintained and after the lapse of two months the patient's general condition had improved but there was still a considerable amount of discharge and some absorption as indicated by an evening rise of temperature to 100 or 101 F A roentgenogram taken at this stage showed a shadow cast by stones near the middle line of the body, but in consequence of the contraction of the pyonephritic sac toward the opening in the right abdominal parietes to which it had been sutured the shadow was drawn well to the right of the middle line and therefore appeared to be quite accessible to the finger introduced into the sinus opening thus making it possible to remove it with safety by a comparatively slight operation Accordingly March 20, under gas anesthesia, I enlarged the drainage opening sufficiently to admit two fingers I located the stones and by scratching through the kidney substance surrounding them, using the bare ungloved finger for the purpose, I succeeded in enucleating from its bed a calculus the size of a large walnut It was surrounded by many small calculi varying in size from a grain of rice to a small pea These were removed along with a considerable amount of gritty material which was taken out by curetting with a scoop followed by gauze on forceps Presumably, the stones lay in the pelvis of the right kidney

On the posterior wall of the cavity adjoining the pocket that had contained the stones, I detected a somewhat prominent mass of tissue which I took to be kidney substance I attempted the removal of a portion of this tissue in order that I might determine by microscopic section, the nature of the condition present I enucleated a piece about the size of a walnut This was preserved for future examination Hemorrhage was slight and was easily controlled I closed the wound still maintaining drainage as before There was no evidence of metastases

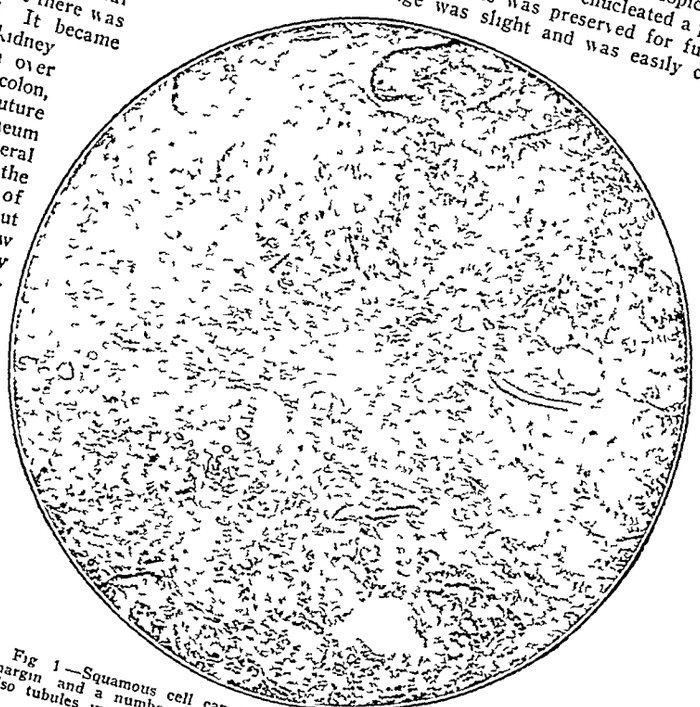

Fig 1—Squamous cell cancer of the kidney tumor growth at margin and a number of sclerosed and partially sclerosed glomeruli also tubules invaded by the growth × 50

At the time of the first operation a guinea-pig was inoculated from the pus contained in the cyst The pig was killed eight weeks subsequently, but was found negative for tubercle bacilli

The sinus continued to discharge, but the patient's general nutrition was maintained for about five months after the operation when she began to fail Toward the latter part of her illness, she developed a fecal fistula, while a tumor growth of a very hard consistency developed She died eight months subsequent to her first opertion It was impossible to obtain a necropsy

Microscopic Examination—The tissue removed at the second operation proved to be a squamous cell carcinoma The kidney substance in this section was infiltrated and almost destroyed by epithelial cells which showed marked pearl formation (hornification) several areas showed epithelial cells growing in the dilated lumen of the tubules surrounding the epithelial cell nests A marked fibrosis had

occurred which replaced most of the kidney substance Dotted through the section were dilated glomeruli showing atrophic changes, and around several of these glomeruli there was a round cell and plasma cell infiltration, as shown in the accompanying photomicrographs The condition was one with which we had hitherto been unfamiliar

ORIGIN OF THE DISEASE

We may assume at the outset that squamous cell cancer of the kidney has its origin in the pelvis or calices of the kidney We can better understand the validity of this assumption by a study of the conditions antecedent to its production

The normal histologic structure of the mucous membrane of the renal calices, pelvis and ureter is a transitional epithelium, of a character similar to that found in the bladder It is therefore not surprising that the histologic structure of new growths originating from the mucous membrane of these urinary passages has very similar characteristics A villous papilloma is a benign growth of frequent occurrence in the bladder, and has also been found as a primary growth in the ureter, pelvis and calices That a villous growth may develop into a malignant tumor was demonstrated by Virchow Villous tumors of the ureters have been described by Poll,[4] de Josselin de Jong,[5] Stoerk,[6] Kohlhardt,[7] and others The epithelium in these cases may resemble that of the normal mucous membrane, or may vary within wide limits, being cylindric, cubical, spindle shaped or polygonal, not infrequently different types of cell are present in the same tumor On the other hand, a malignant squamous cell cancer has been found in the urinary passages without villous formation A notable example of this was placed on record by Rundle[8] In his case, the lower 3 inches of the right ureter were involved in a large growth which extended down to within 1 inch of the bladder, a small polypoid growth the size of a pea protruded into the bladder through the ureteral orifice The interior of the ureter, almost up to the renal pelvis, contained numerous small, isolated nodules These multiple tumors presented the histologic picture of a squamous cell cancer Wilson[9] of the Mayo Clinic describes a similar squamous cell epithelioma of the renal pelvis, resembling histologically a cancer of the lip Hektoen[10] records a case of primary cancer of the lower end of the ureter containing cells of different types, oval, spindle and club shaped, he states that, in places, masses of cells showed degenerative changes which might in some instances be mistaken for epithelial pearls

The occurrence of new growth in the calices and the pelvis of the kidney is associated with chronic inflammatory changes due to some form of irritant The frequent association of stone with this condition is noteworthy Calculi were present in the case here recorded Hartman[11] describes a case of primary cancer of the renal pelvis associated with calculous pyelitis Kischensky[12] found the ureter blocked with calcareous concretions, and Scheel,[13] although he did not find a stone, suspected one had been present at an earlier date from the previous history of pain, etc Wilson[9] mentions two cases superimposed on extensive renal calculous formation In most instances, the subepithelial connective tissue exhibited a round cell inflammatory infiltration (Scheel,[13] Kischensky,[12] Stoerk,[6] and others) The most noticeable feature in this regard, however, is the associated proliferation of the transitional epithelium of the ureter, pelvis and calices This was present to an exaggerated degree in Kischensky's case in which, associated with a squamous cell cancer of the calices of the kidney, there were extensive metaplastic changes in the epithelium of the calices, pelvis and ureter Thus the wall of the ureter presented, under the microscope, a cutis-like formation with extensive cornification of the superficial layers of cells, the deeper layers were more or less cylindric, while the superficial layers were composed of pavement epithelium, exhibiting cornification on the surface Some of the cells of the deeper layers exhibited bridges, giving the appearance of prickle cells In the renal pelvis, there was a calcareous incrustation, over which were found pus cells Rokitansky[11] describes a condition in the renal pelvis in which from the proliferated epithelium there is much desquamation, these desquamated cells are massed together with much detritus and cholesterin crystals, producing the condition which he describes as cholesteatoma

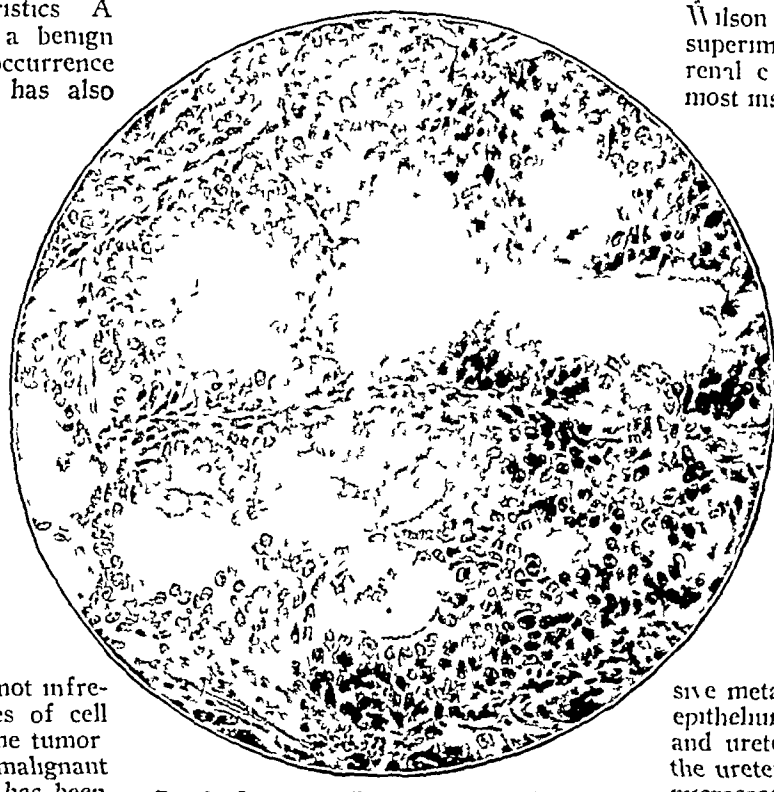

FIG 2—Squamous cell cancer of the kidney tumor growth and renal tubules, × 200

4 Poll B Ein Fall von multipler Zottengeschwulst im Ureter und Nierenbecken Beitr z klin Chir (Bruns) **23** 822 1899

5 De Josselin de Jong Ein Fall von Carcinoma papillare des Nierenbeckens Beitr z path Anat u z allg Path (Ziegler s) **35** 205 1904

6 Stoerk Oskar Ein Fall von Papillomatose des Nierenbeckens des Ureters und der Blase Beitr z path Anat u z allg Path (Ziegler s) **26** 368 1899

7 Kohlhardt H Ueber eine Zottengeschwulst des Nierenbeckens und des Ureters Virchows Arch f path Anat **148** 565 1897

8 Rundle H Epithelioma of the Ureter Causing Hydronephrosis Tr Path Soc London **47** 128 1896

9 Wilson L B The Embryogenetic Relationships of Tumors of the Kidney Suprarenal and Testicle, Collected Papers of the Mayo Clinic 1912 p 304

10 Hektoen Ludvig Observations on Gumma of the Hypophysis and Primary Carcinoma of the Ureter J A M A **26** 1115 (June 6) 1896

11 Quoted by Kischensky (Footnote 12)

12 Kischensky D P Primärer Plattenepithelkrebs der Nierenkelche und Metaplasie des Epithels der Nierenkelche, des Nierenbeckens und des Ureters, Beitr z path Anat u z allg Path (Ziegler s) **30** 348 1901

13 Scheel P P Ueber ein eigenartiges Krankroid der Niere Virchows Arch f path Anat **201** 311 1910

Baselin [14] records a similar condition which he calls cholesteatomatous desquamation of the cells of the pelvis associated with primary tuberculosis of the kidney

The epidermization of the transitional epithelium in the ureter, pelvis and calices may thus proceed with a high degree of cell proliferation, in which the superficial layers are hornified Halle [11] has suggested for this condition the name leucoplasie urmaire, resembling the so-called leukoplasia of the mouth cavity, which is not infrequently recognized as a precancerous condition

The fact that squamous cell cancer of the kidney is due to the invasion of the kidney substance by a growth which is primary in the pelvis and calices is attested by the findings in certain of the reported cases Scheel,[13] for example, records a case of a tumor which presented the characters of a squamous cell epithelioma of the kidney substance, showing pearls and hornification This was in direct continuity with a tumor of the kidney pelvis in which the cells were mostly cylindric in type, and which developed as a villous growth, these cells were supported on a vascular connective tissue which was infiltrated by a growth of squamous cells with pearl formation and basal cells Between the squamous cell growth of the kidney substance and the tumor of the pelvis there was almost everywhere a sharply defined barrier of connective tissue, but in certain places this barrier was broken down and the two growths become continuous Scheel considers the two growths of common origin, and concludes that the original tumor was an epithelioma arising probably in connection with the kidney calices and developing, on the one hand, as a cylindric cell papilloma invading the kidney, pelvis, and on the other hand, as a squamous cell cancer of the kidney substance Hildebrandt [15] describes a large growth which in its pelvic portions was papillary and in the renal substance scirrhous (Ewing [16]) Cylindric cell papillomas in the pelvis and ureters have been described by several writers Rundle's case, already quoted, gives us an example of a squamous cell growth ocurring in the ureter without villous formation

Busse [17] describes a case of squamous cell cancer of the bladder associated with papillomatous growths in the ureter

It would appear, therefore, that squamous cell cancer of the kidney substance is derived from a primary growth in the calices or pelvis, this in turn may be accompanied, as in Kischensky's case, with extensive metaplasia and epidermization of the epithelium of the calices, pelvis and ureters

These squamous cell carcinomas of the kidney or pelvis are accompanied by extensive metastases In the case recorded in this paper it was impossible to establish the existence or nonexistence of these, as it was impossible to obtain necropsy In Scheel's [13] case, metastases occurred in the liver, the lung and the hilum glands In Kischensky's [12] case they were present in the liver, the hilum glands and in the lower end of the femur In all instances the metastatic growth exhibited the characteristic structure of squamous cell cancer

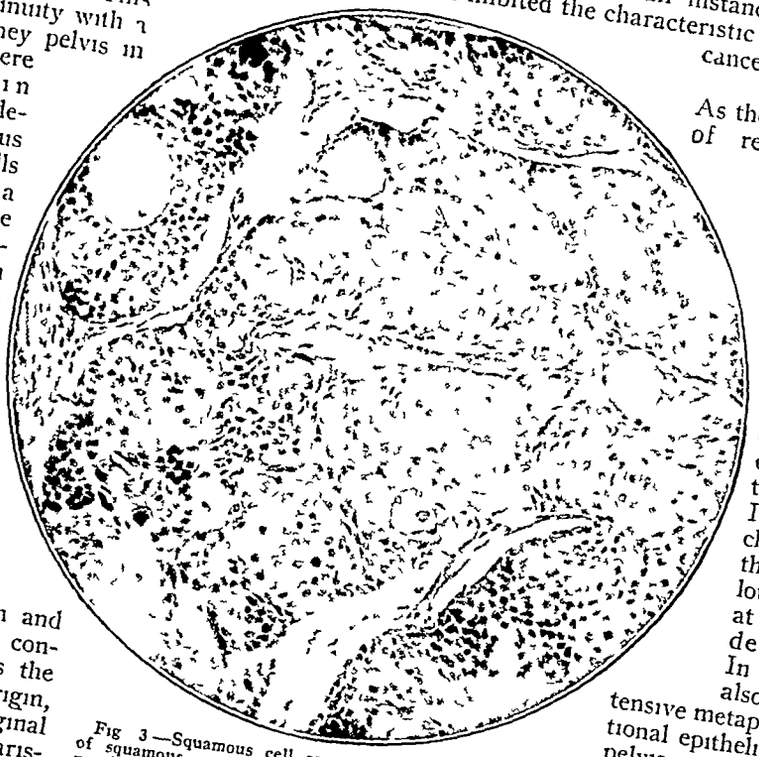

Fig 3.—Squamous cell cancer of the kidney masses of squamous epithelial cells with pearl formation also renal tubules × 130

CONCLUSIONS

As the result of a critical study of recorded cases we may arrive at the conclusion that the usual form of renal tumor described as squamous cell cancer is a growth having its origin in the transitional epithelium of the calices and renal pelvis with subsequent invasion, by direct extension, of the kidney substance Its development is closely associated with the production of villous growths which, at first benign, may develop malignancy In certain instances also there may be extensive metaplasia of the transitional epithelium of the calices, pelvis and ureter The entire process is probably preceded by chronic inflammatory changes produced by some irritant, such as the presence of stone

ABSTRACT OF DISCUSSION

DR ARTHUR DEAN BEVAN Chicago Twenty-five years ago we did not have the same conception of kidney tumors that we have today I had an opportunity to work in Birch-Hirschfeld's pathologic institute in Leipzig when he was doing a great deal of work on hypernephroma He coined the word A large series of cases reported by Israel then were mostly considered carcinoma then sarcoma, but after the work of Birch-Hirschfeld, Israel studied his specimens again, and instead of reporting carcinoma as a common type of malignant tumor of the kidney, he labeled these cases hypernephroma For a number of years we have accepted the view that hypernephroma is a common type of malignant tumor of the kidney Of more than one hundred cases of malignant tumors of the kidneys in my own service, hypernephromas numbered more than 80 per cent of the total cases, sarcoma, occurring early in life formed the second group Carcinomas are exceedingly rare I have had only four cases in which the microscope showed carcinoma The type of carcinoma has been for the most part the same

14 Baselin Otto Cholesteatomartige Desquamation im Nierenbecken bei primarer Tuberkulose derselben Niere Virchows Arch f path Anat **99** 289 1885

15 Hildebrandt Arch f klin Chir (Langenbeck's), quoted by Ewing (Footnote 16)

16 Ewing James Neoplastic Diseases Philadelphia W B Saunders Company 1919 p 743

17 Busse Otto Geschwulstbildung in den grossen Harnwegen Virchows Arch f. path Anat **164** 119 1901

as is found in the bladder and, occasionally, in the ureter It is not at all surprising that under certain conditions metaplasia takes place Years ago it was pointed out that metaplasia occurred in the epithelium of the gallbladder and that squamous carcinoma developed Today that is a well-recognized fact Another interesting fact is the development of leukoplakia in the bladder, ureter and pelvis of the kidney, especially in the presence of chronic irritation A number of cases of epithelioma of the body of the uterus from chronic irritation from the stem pessary have been reported

DR WILLIAM J MAYO, Rochester, Minn We can get a better idea of the solid tumors of the kidney by going back to the embryology of the organ I agree with Cushny that the kidney is essentially a filter That part of the kidney which rises from the diverticula of the wolffian duct and is lined originally by pavement epithelium forms the part of the kidney that collects the urine, that is, the pelvis, the calices and the straight tubules, and from these tissues originate the transitional forms of carcinoma Dr Primrose described I agree with Dr Bevan as to the great frequency of the so-called hypernephroma These tumors are mesotheliomas derived from the filter part of the kidney as shown by Wilson, and not hypernephromas Merely because it was noted that their structures were arranged in parallel columns and were yellow, they were believed to have their origin in suprarenal rests The little yellowish bodies believed to be suprarenal rests are found in the capsule, while the tumors themselves are found in the substance of the kidney The case that Dr Primrose reported is exceedingly interesting because the tumor occurred in a horseshoe kidney which would add greatly to the difficulties of removal We have observed a small number of such tumors, but none in horseshoe kidneys The operations have been exceedingly difficult In some of our cases, in which the right kidney was involved, the retroperitoneal part of the duodenum was injured in an attempt to remove it In one case, the injury was due to rat toothed forceps hastily applied to check hemorrhage, necrosis and leakage followed and in two weeks the patient lost almost all the superficial epithelium of the body The patient died In the second case, after the fistula had occurred, I made an incision in front, dissected the duodenum up closed the fistula and tucked the omentum around it, this patient recovered I have since seen two similar cases and have known of a number of other cases of this type of malignant disease involving the pelvis of the kidney in which the accident happened in attempts to perform nephrectomy and except in the cases in which a second operation was made in front and the fistula closed by suture, the patients died The vena cava may be injured in the removal of these tumors on the right side This accident is not necessarily a fatal one It is surprising how readily the vena cava may be mended, it can be picked up between the fingers and can be sutured with catgut care being taken that the endothelium on the inside of the vessel is brought into contact In exactly the opposite of the method of suturing the intestine big notches involving nearly a half of the lumen may be left without harm

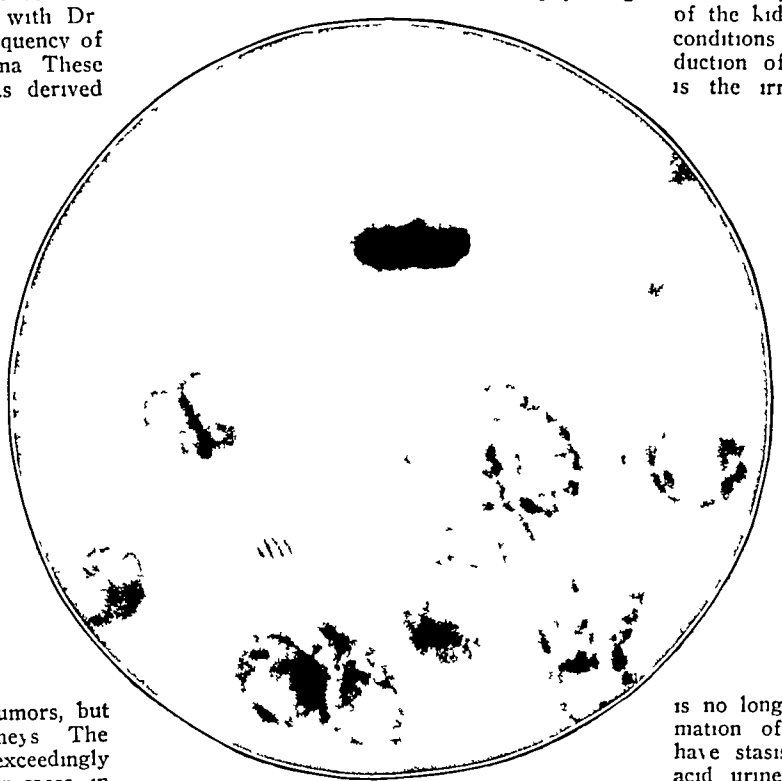

Fig 4—Squamous cell cancer of the kidney a number of mitotic figures (monaster) a number of these are found throughout the tumor showing a fairly rapid growth × 2 000

DR JOHN J GILBRIDE, Philadelphia There may be considerable difficulty in making a diagnosis because of the absence or almost complete absence of local signs or symptoms in the early stages of the disease, even after one has been able to palpate a definite mass in cases of hypernephroma or sarcoma of the kidney There may be an absence of blood or other changes in the urine until the case is so far advanced that the patient practically dies of suppression of urine and the symptoms are those of uremic coma In malignant disease of the kidney one frequently finds a slight elevation of temperature, perhaps 99 or 99 5 or a little higher, together with an increase in the pulse rate —up to 80 90 or even 100—suggesting the presence of an infection Even after extensive study and careful roentgenray examination I have seen cases of malignant disease of the kidney in which a diagnosis of infection had been made

DR ALBERT J OCHSNER, Chicago I wish to direct attention to the physiologic reason why the squamous cancers of the kidney are so rare Three conditions help to favor the production of cancer One of these is the irritation which we have here in the presence of stone in the pelvis of the kidney constantly The second one is the stasis found in the production of cancer in every cavity where it occurs The third is the acid medium In the kidney an acid medium is present all the time so long as the urine is normal, but so long as the urine is normal even in the presence of uric acid stone or oxalate of calcium stone, the irritation is slight because there is constant washing away of the surface by normal urine On the other hand, as we have the development of stasis we have alkaline urine and the condition is no longer favorable to the formation of cancer If we could have stasis and irritation and an acid urine at the same time, in this location, there can be no doubt that squamous carcinoma of the pelvis of the kidney would be common

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Symptoms of Breast Cancer—The so-called classical symptoms of the textbooks are positively dangerous from the point of view of prognosis To wait for their appearance is, in many cases, to wait till the disease is well-nigh incurable The early signs of breast cancer are symptomless, the accidental discovery of a lump in the breast is usually the first sign of trouble Pain is very rarely present at this stage, and here be it noted how extraordinarily difficult it is to convince many women of the very serious nature of a lesion which is causing no discomfort! The only other sign of breast cancer with which I am acquainted is dimpling of the skin of the breast over the tumor, this is never to be seen over nonmalignant tumors unless they have become infected On the presence of a single hard lump in the breast of any woman over thirty years of age I am prepared to suspect cancer, if the skin dimples over the lump, I believe she has cancer and that the least possible delay should take place in operating if our patient is to have a permanent cure—W Doolin *Med Press* April 28 1920

SYPHILIS OF THE KIDNEY*

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The majority of textbooks on general medicine give but scant attention to the subject of syphilis of the kidney. Even the latest edition of Osler,[1] that great storehouse of medical information, devotes only two short paragraphs to its consideration. The same statement may be made concerning most textbooks on genito-urinary diseases, although in Cabot's[2] "Modern Urology" there appears a quite comprehensive description of renal syphilis. Even in the periodical literature of the last decade are to be found comparatively few references to the subject. It is therefore apparent that the importance of syphilis of the kidney is often overlooked, both by the internist and by the genito-urinary specialist, so it seems opportune at this time to review rather completely our knowledge of the subject and to add some personal observations.

INCIDENCE

The incidence of syphilis of the kidney is difficult of determination, as statistics concerning its frequency are not common. Spiess,[3] in 1877, published the necropsy findings in 220 syphilitics in which the kidneys were affected as indicated in the accompanying tabulation.

CONDITION OF KIDNEY IN TWO HUNDRED AND TWENTY SYPHILITICS

	No.
Parenchymatous nephritis	21
Interstitial nephritis	16
Sclerogummatous nephritis	7
Sclerosis	18
Atrophy	11
Amyloid degeneration	42
Various inflammations only partly attributable to syphilis	16

Warthin[4] found changes in the kidneys, chronic passive congestion, atrophy, infarctions, and local and diffuse inflammations in practically all kidneys of syphilitics. In the first forty-one cases studied, there were seventeen cases of acute, subacute and chronic parenchymatous nephritis, and three cases of interstitial nephritis. This author states, however, that the relation of the syphilis to these conditions is not apparent.

Osler[1] states that it has been estimated that acute syphilitic nephritis occurs in 3.8 per cent of all syphilitics in the so-called secondary stage. This figure would seem to be entirely too high, as it has been shown by Karvonen,[5] Cole[6] and others that acute syphilitic nephritis is a comparatively rare condition. In an observation of several hundred cases of early syphilis, I have seen but one case of acute involvement of the kidney, although a number of cases have shown mild transient albuminuria.

HISTORICAL

The early syphilographers apparently did not recognize syphilis of the kidney, and even Astruc,[7] whose "De morbis venereis," published in 1736, contains many references to visceral syphilis, is silent on the subject. And although Morgagni[8] as early as 1761 pointed out that the kidney could be attacked by the syphilitic process, John Hunter,[9] in 1786, wrote that he had never seen the kidney and other viscera involved, but that such cases had been described.

To Rayer,[10] however, in 1840, belongs the honor of first recognizing syphilis of the kidney clinically, although, according to Lancereaux,[11] Wells, Blackwell and Gregory of England had already observed changes in these organs in venereal disease which they attributed to the action of mercury used in treatment rather than to the syphilis itself. Lancereaux, himself, recognized three forms of syphilis of the kidney, namely, diffuse interstitial nephritis, gummas and cicatrices, which are the end-results of the preceding forms.

Since the time of Lancereaux, the knowledge of kidney syphilis has been gradually increasing, both from the anatomic and the clinical points of view, and I will now attempt to describe the various types that have been observed.

PATHOLOGY

Syphilis of the kidney may be divided into these varieties:

I. Early involvement
   1. Transient albuminuria
   2. Acute and subacute nephritis

II. Late involvement
   1. Chronic interstitial and parenchymatous nephritis
   2. Amyloid kidney
   3. Gummas

The pathology of the transient albuminuria, seen early in the course of syphilis, is comparable to similar conditions observed in other infectious diseases. It is probably not due to the actual invasion of the kidney by spirochetes, but is due to the toxins generated by these organisms during the course of the general infection. The condition represents the response of the tissues to the irritation, and there are degenerative changes in the epithelium of the convoluted tubules, and small quantities of coagulated serous exudate in the glomeruli.

Acute syphilitic nephritis presents a pathologic picture similar to that found in other types of acute nephritis. The kidneys are enlarged (large, white kidney), the cortex thickened, and the capsule strips easily. On section, the parenchyma is seen to be of a gray, homogeneous color. Histologically, the lining epithelium of the convoluted tubules is swollen, granular and often completely destroyed. There is a marked infiltration of lymphocytes and some polymorphonuclears, while the arteries usually show a beginning endarteritis. The glomeruli are usually not markedly involved, but sometimes they are increased in size and consist almost entirely of polymorphonuclear leukocytes in various stages of degeneration. There is a more or less marked interstitial edema. Spirochetes have been demonstrated by LePlay and

* Read before the Section on Practice of Medicine at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

1 Osler, William, and McCrae, Thomas: The Principles and Practice of Medicine, Ed. 8, New York and London, 1918, p. 276.

2 Cabot, Hugh: Modern Urology, Philadelphia, Lea & Febiger, 1: 184, 1919.

3 Spiess, F.: Ueber die verschiedenen Nierenaffektionen bei Syphilis constitutionalis, Berlin, 1877, pp. 20, 29.

4 Warthin, A. S.: The New Pathology of Syphilis, Am. J. Syph., 2: 425, 1918.

5 Karvonen, J. J.: Munuaissyfilomlista Duodecim, Helsinki, 14: 425, 1898; 15: 1, 1899; translated in Dermat. Ztschr., 5: 602, 1898; 7: 37, 183, 460, 770, 903, 1900.

6 Cole, H. N.: Acute Syphilis of the Kidney: Report of a Case, Am. J. Syph., 4: 46 (Jan.), 1920.

7 Astruc, J.: De morbis venereis, Paris, 1736.

8 Morgagni, J. B.: De Sedibus et Causis Morborum Venetiis, 1761.

9 Hunter, John: A Treatise on the Venereal Disease, American Edition, Philadelphia, 1786, p. 279.

10 Rayer, P.: Traité des maladies des reins, Paris, 2: 485, 1840.

11 Lancereaux, E.: Traité de la syphilis, Paris, 1866, p. 290.

Sezary [14] in the kidney of a patient dying of acute nephritis, while Dreyer and Toepel,[13] and later Hoffmann,[14] found these organisms in the urine of patients suffering with syphilitic nephritis

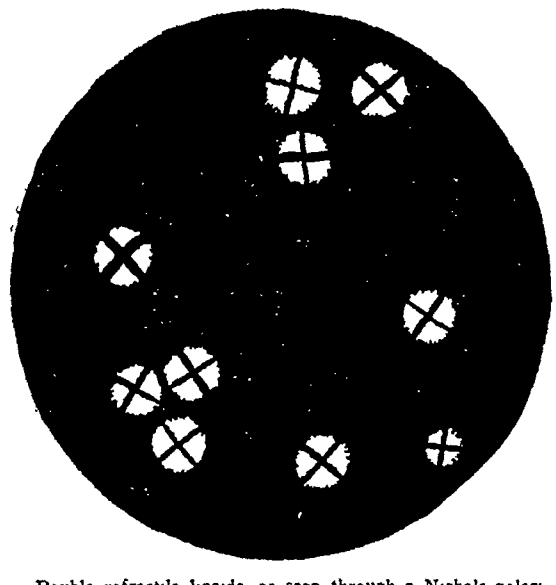
The picture in the subacute type of syphilitic nephritis is similar to that found in the acute, but the glomeruli are involved more severely in the process

Chronic syphilitic nephritis occurs both in the interstitial and the parenchymatous forms, although the two are more or less associated The kidneys are usually of normal size, although they may be either increased or diminished, and are of pale color and firm consistency Histologically, the picture does not differ from chronic nephritis due to other causes

Amyloid kidney is the result of long-continued toxemia, and that due to syphilis differs in no respect from amyloid kidney of other etiology Faroy [15] was able to demonstrate spirochetes in small numbers in the amyloid kidneys of a woman in whom other evidences of syphilis were found at necropsy

Gummas of the kidney are rather rare, but do occur either as single or multiple tumors, and vary in size from 1 or 2 mm to several centimeters In Bowlby's [16] case a gummatous tumor of the right kidney, weighing 17 ounces, was removed at operation Gummas are found both in the cortex and in the medulla, and appear as pale, yellowish nodules Histologically they are the same as gummas of other locations

Not infrequently the kidneys of syphilitics present a sclerogummatous process in which, in addition to small multiple gummas, there is a diffuse atrophic sclerosis with hyaline degeneration of the glomeruli, and atrophy of the convoluted tubules There are also fatty degeneration of the epithelium of the tubules and endarteritic changes in the blood vessels, even complete obliteration



Double refractile lipoids as seen through a Nichols polariscope from a case of subacute syphilitic nephritis

CLINICAL HISTORY

There is little or no symptomatology connected with the early transient albuminuria of syphilis other than the small amount of albumin in the urine This is of quite frequent occurrence, and would probably be more often recognized if the urines in all cases of early syphilis were examined It is observed during the second incubation period, but more frequently as an accompaniment of the early cutaneous manifestations Casts are rarely demonstrated, and other urinary findings are nil

Acute syphilitic nephritis may occur at any time following the chancre, in some instances before the cutaneous manifestations Audry [17] reported two such cases Of twenty-six cases occurring during the first year seen by Fournier,[18] eleven developed in the second month, while Mauriac [19] states that acute syphilitic nephritis may occur as late as three years after infection However, the average date of onset is about the fifth month, which was the date of my case, and this disorder is rarely seen after the first year

The onset is generally insidious, although rarely it may be sudden The first symptom to be observed is usually edema, which may develop rapidly, producing general anasarca and even ascites and hydrothorax There is moderate asthenia, though the general condition of the patient is remarkably good, in view of the kidney involvement Anemia and loss of weight are sometimes more or less prominent symptoms In those cases which develop suddenly there are usually severe pains in the lumbar region, anorexia, fever and perhaps nausea and vomiting

The urinary findings are similar to those observed in other types of acute nephritis Oliguria is usually present, the total quantity of urine excreted during twenty-four hours sometimes running as low as 300 c c or less It may be smoky, but more frequently is clear, amber and of high specific gravity The most striking feature is the enormous quantity of albumin, sometimes being so great as to coagulate on boiling so that the urine cannot be poured from the tube Hoffmann [14] has seen the albumin content from 3 to 13 per cent, while in Cole's [6] case it was 15 per cent In my case it was 3 2 per cent Tube casts of all kinds, particularly the fatty variety, are observed in the sediment, although the number of casts is not nearly so striking as the quantity of albumin A few red blood cells and leukocytes to a greater or less extent are also found Epithelium cells usually are numerous Munk called attention to the presence of lipoids observed as fine droplets or in packets, either in the epithelial cells or in the casts which are doubly refractive through a Nichols polariscope Under the ordinary microscope these droplets resemble neutral fat globules, varying in diameter from that of an erythrocyte to three or four times that size, but when examined with the polariscope they show a dark central cross separating four bright peripheral quadrants While Munk [20] found these lipoids in the urine of several cases of nephritis of nonsyphilitic origin, they were more abundant in syphilitic nephritis This is in accord with the findings of Stengel and Austin,[21] as well as my own

Renal function seems to be considerably less impaired than in acute nephritis of other etiology

12 LePlay A and Sézary A Constatation du treponème dans la neplrite syphilitique secondaire Sem med **31** 238 1911
13 Dreyer and Toepel Spirochaete pallida im Urin bei syphilitische Nephritis Dermat Centralbl **9** 172 1906
14 Hoffmann Erich Ueber akute syphilitische Nierenentzündung in der Frühperiode (Nephritis syphilitica acuta praecox) Deutsch med Wchnschr **39** 353 1913
15 Faroy, M G Constatation du treponème pale dans la syphilis tertiare du rein avec degenerescence amyloide Sem méd **31** 527, 1911
16 Bowlby A A Gummatous Disease of the Kidney Causing a Large Renal Tumor Tr Path Soc London **48** 128 1897
17 Audry C Ann de dermat et de syph **3** 277 1912
18 *Fournier A Traité de la syphilis Paris* **1** *735 1899*
19 Mauriac C Syphilose des reins Arch gen de med **2** 385, 1886
20 Munk F Diagnostik und Therapie syphilitischer diffuser Nierenerkrankungen (syphilitische Nephritis) Dermat Ztschr **21** 391 1914
21 *Stengel A and Austin J H Syphilitic Nephritis Am J M Sc* **149** 12 1915

In my case the phenolsulphonephthalein excretion was 50 per cent in the first hour and 25 per cent in the second (subcutaneous)

Chronic syphilitic nephritis is of comparatively infrequent occurrence, and is usually seen from three to ten years following the infection It may, however, occur earlier In one of my cases albumin was found in the urine eighteen months after the appearance of the chancre, and in another one eight and one-half years The symptoms will depend on whether the interstitial or the parenchymatous variety predominates In the former case it is characterized by polyuria, small amounts of albumin, few hyaline casts, and little or no edema, but high blood pressure In parenchymatous nephritis the urine is scanty, of high specific gravity, and contains more or less albumin, and usually hyaline and granular casts There is usually edema, and the blood pressure is increased, while anemia is more or less marked

Amyloid kidney is also of late occurrence in syphilis, and is characterized by a large amount of albumin in the urine, which is usually diminished in quantity, but may be increased There is generally more or less anemia and edema of the face and legs The blood pressure is normal or low

Gummas of the kidney occur late in the course of the disease, rarely before the fourth or fifth year, and will cause symptoms depending on their size and location They may sometimes cause symptoms resembling renal calculus Occasionally they develop to such a size that they are palpable

In Bowlby's [10] case a woman, aged 40, had noticed a swelling in the right renal region for three months, which caused some discomfort The right kidney was movable, usually hard, and a little enlarged Except for a trace of albumin, the urine was normal and the patient was otherwise in good health A year later the tumor had grown considerably larger and was more painful, while the urine was normal in quantity, but contained a trace of albumin At this time a definite history of syphilis twenty-one years previous was obtained Nephrectomy was performed, a tumor weighing 17 ounces removed, and the patient made an uneventful recovery

DIAGNOSIS

The diagnosis of the early transient albuminuria of syphilis, when occurring as an accompaniment of the cutaneous manifestations, is, as a rule, easy, and this condition should be recognized in all cases That occurring prior to the cutaneous outbreak, however, may be more difficult of recognition, although a slight albuminuria with few or no casts without other obvious etiology should arouse suspicions of syphilis, and a thorough investigation for that disease should be instituted

Acute syphilitic nephritis must be differentiated from acute nephritis of other etiology, and, as with the transient albuminuria, when it occurs as an accompaniment of cutaneous lesions this is usually easy, although the fact must not be lost sight of that acute nephritis of other etiology may occur in a syphilitic And, furthermore, as Hoffmann [14] has pointed out, the edema may be so great as completely to mask the skin and mucous membrane eruptions

A nephritis occurring in an individual without the cutaneous manifestations of syphilis, of insidious onset, with marked edema and large quantities of albumin, with few casts, comparatively little general disturbance and only moderate lowering of renal functions, should arouse suspicions of syphilis The finding of double-refractile lipoids or spirochetes in the urine, or a positive Wassermann test would be most suggestive, although, as pointed out above, double-refractile lipoids are found in other types of nephritis, and it must be remembered that spirochetes in the urine need not necessarily come from the kidneys However, if found in a specimen of urine obtained by ureteral catheterization, the diagnosis of syphilitic nephritis would be almost certain

Probably the most valuable point in the diagnosis of acute syphilitic nephritis is the result of specific therapy, particularly arsphenamin

A nephritis developing in a syphilitic who is undergoing mercurial treatment may be confusing, and a true syphilitic nephritis must be differentiated from a mercurial nephritis As a rule, the latter improves on the suspension of the mercury, which is not true of the former

The diagnosis of chronic syphilitic nephritis may be most difficult, but it seems to me that if all nephritics were examined for syphilis, both clinically and by laboratory methods, more cases of syphilitic nephritis would be found Of course other evidences of syphilis and positive laboratory tests would not be absolute proof that the nephritis was syphilitic, but the improvement of the condition under carefully administered specifics would be strong presumptive evidence that such is the case

Amyloid kidney due to syphilis can be diagnosed only by finding other evidences of a long-standing syphilis in a patient with a scanty urine, large quantity of albumin, anemia and edema of the face and legs A low blood pressure would also be significant

Gummas of the kidney may sometimes cause symptoms resembling renal calculus, but the two conditions should be differentiated by the presence or absence of other manifestations of syphilis and the use of the roentgen ray

Gummas of palpable size have been mistaken for malignant tumors However, the history and other evidences of syphilis, including a positive Wassermann test, in gummas should clear up the diagnosis Malignant tumors also usually occur later in life and produce more cachexia than do gummas

A renal tumor occurring in a patient with other evidences of syphilis would be an indication for specific therapy, and if improvement in the kidney conditions did not occur, a microscopic examination following nephrectomy would reveal the true nature of the tumor

PROGNOSIS

The prognosis of the early transient albuminuria of syphilis is good, as such conditions readily clear up under specific therapy

The outlook for acute syphilitic nephritis is much more grave, although in even markedly severe cases recovery occurs under careful treatment, and undoubtedly the prognosis is better in this type of case than is acute nephritis of other etiology

Chronic syphilitic nephritis possibly presents a more favorable outlook than does the acute variety, although in most instances a prognosis should be reserved until the effect of antisyphilitic therapy can be noted

Amyloid kidney is most resistant to treatment, and death with increasing cachexia is the usual outcome

Most cases of gummas of the kidney which have been recognized clinically have been cured by specific therapy

TREATMENT

In kidney syphilis the treatment should be twofold, that is, directed toward the syphilis and toward the kidney condition In the transient albuminuria occurring early in the course of syphilis, specifics and general treatment alone are indicated Specifics, however, must be administered with extreme caution in all nephritic conditions, the urine being examined for albumin and casts, and the phenolsulphonephthalein test being performed at frequent intervals

In acute syphilitic nephritis, rest in bed is imperative Diuretics, such as digitalis and potassium citrate, as well as cathartics, should be administered Hot packs to promote diaphoresis should be applied, especially in severe cases The diet should be nourishing, and consist largely of carbohydrates, while a strict milk diet is desirable in some cases Mercury should be withheld until the urine is free from albumin or nearly so, while arsphenamin should be administered in doses not to exceed from 0 1 to 0 2 gm at weekly intervals Slight exacerbations following the injection of arsphenamin should be disregarded and the dose repeated at the proper time

In chronic syphilitic nephritis, after the diagnosis has been established by the improvement of the condition under the administration of a small dose of arsphenamin, specifics should be pushed as intensively as possible, particularly the arsenicals, which are much better tolerated than the mercurials

The treatment of syphilitic amyloid kidney is symptomatic, although specifics may be administered, but with little hope of success

Large and increasing doses of potassium iodid as well as arsphenamin and mercury, are indicated in gummas of the kidney

ABSTRACT OF DISCUSSION

DR. WILLIAM H MERCUR, Pittsburgh A few years ago Sir Rose Bradford, discussing a case of chronic nephritis, stated that when an unusually large amount of albumin was present in the urine it might be due to syphilis Such patients do not usually show the customary clinical signs of being very ill

DR. J B MCELROY, Memphis Tenn I have seen several of the cases described by Dr Thompson, and there seems to be nothing specific so far as the syphilis is concerned They are the same cases which present the clinical syndrome which we recognize as degenerative nephropathies nephroses, symptoms which are characterized by the absence of high blood pressure, the occurrence of considerable edema, and a large quantity of albumin in the urine, with an absence of red blood cells

This syndrome is characteristic of degenerative nephropathies and occurs in other conditions as well as in syphilis We must drop the terms parenchymatous, interstitial, etc, which occur in connection with nephritis

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Insecticides.—Naphthylamin crystals are used to kill body lice by sprinkling them down a man's neck between his shirt and skin Powdered sulphur, generally in the form of an ointment is used against the itch mite Mercurial ointment is used against the pubic louse by rubbing it in the affected part night and morning Various solutions, such as 1 500 solution of mercury bichlorid and 5 per cent phenol, are used to kill insects and liquor formaldehydi is used quite extensively in fly traps, although the gas formaldehyd is not an insecticide—*U S Nav M Bull* January, 1920

CURE OF PANCREATIC FISTULA BY THE ROENTGEN RAY

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HOT SPRINGS, ARK

Two cases of pancreatic fistula under my observation have permanently closed after treatment by the roentgen ray They are reported for the information of those likely to encounter such conditions No attempt will be made to explain this action of radioactivity, which was used in these cases in the purest empiric manner If the application of the roentgen ray inhibits pancreatic secretion, the reason for the favorable outcome in both cases is plain

CASE 1.—A French soldier was wounded about Dec 15, 1916 by a machine gun bullet that passed through his body at the umbilicus I saw this man three days after the receipt of the injury at a *repartition station* The wound of entrance was ulcerated and excavated and all fatty tissues about the wound were necrosed A copious discharge looked like thin *mayonnaise dressing* indicating digestion of fatty tissues deeper than the abdominal wall The patient had been kept narcotized by opiates, and no food or water had been taken since he was wounded The surgical consultant on duty at the repartition station suggested roentgen-ray treatment, stating that he had heard of favorable influence in similar cases Exposure for five minutes to a very soft tube with the skin protected by sole leather resulted in complete cessation of discharge of pancreatic juice after five daily treatments with subsequent healthy granulation and complete healing of the wound

CASE 2.—A B a retired soldier, aged 66 admitted to the Army and Navy General Hospital with the diagnosis of gastric ulcer which was concurred in was found, on laparotomy, to have a carcinoma involving the lesser curvature of the stomach, pylorus, duodenum and head of the pancreas I performed a posterior gastro-enterostomy with the greatest difficulty because of friability and comparative immobility of the tissues The immediate postoperative course was stormy, and about the fourth day all catgut sutures in the operation wound parted, allowing the wound to gape widely Accompanying this unaccountable wound disaster was a profuse discharge which my assistant described by an exclusive remark that 'it was not blood pus or serum' Had it not been for the experience with Case 1, I should probably not have recognized this as a case of fat necrosis due to escape of pancreatic juice which was brought to the wound area and surface by a small rubber tissue drain The break into the pancreas no doubt occurred during the manipulations of this organ while the extent of the carcinomatous growth was being outlined or from handling during the performance of gastro-enterostomy Fat necrosis proceeded very rapidly, with destruction of all fatty tissues in and around the wound with a profuse discharge from the depths of the wound, indicating intra-abdominal fat necrosis

The roentgen ray was applied in this case in the same manner as in Case 1, a soft tube being used, backing up a 1½ inch spark gap, with the target 15 inches from the wound, and the skin protected by sole leather After the third daily roentgen-ray application of five minutes' duration the discharge of emulsified fat entirely ceased and healthy granulations began which quickly proceeded to complete healing The patient appears to be almost entirely well, although carrying with him a widespread gastro-intestinal carcinoma

The very pronounced beneficial changes following the use of the roentgen ray in both these cases suggests a trial of this expedient on all patients with pancreatic fistula, since it appears that the activity of the pancreas can be inhibited or at least put in abeyance by radioactivity

TYPES AND TREATMENT OF PELLAGRA *

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Professor of Clinical Medicine, Emory University School of Medicine
ATLANTA, GA

Two cases of pellagra were reported in America in 1864,[1] and one case, of Italian origin, in 1883 Harris, of Georgia, reported a case in 1902, and since then it has been increasingly studied and reported until it is now found in probably every state in the Union, in the Hawaiian Islands, Mexico, Yucatan and Panama, indeed, from Canada to Chile[3] As clear cut and typical pellagra is found in Maine[4] and Massachusetts as in Georgia and Texas It is no longer a disease merely of the Southern states, and practitioners everywhere should be on their guard against its insinuating presence, for no disease can be diagnosed unless it is first suspected

DECREASE IN NUMBER OF CASES

It is a comment on public health work in America, as well as on the relative youth and vastness of our country, that accurate vital statistics are lacking All figures in their totals are, therefore, estimates It is probable that from 1902 to 1920 there have been 500,000 cases, with 50,000 deaths In 1916, the disease ranked fourth as a cause of death in Mississippi, with 840 deaths, third in Alabama, with 677 deaths, second in South Carolina, with 627 deaths, 607 in Tennessee, and 452 in Texas, or 3,700 deaths in six states[5] The epidemic has shown years of increase, as from 1902 to 1910, years of severity, from 1911 to 1916, and years of decline, from 1917 to the present There is a prevailing feeling among the profession in the South that the number of cases has decreased from 75 to 25 per cent, depending on the locality Even a greater percentage of decrease is reported by a few communities A few statements from official and private communications confirm this estimate of decrease

(*a*) Illinois Decreasing as well as becoming less virulent in character As a menace to the public health, the disease seems to have disappeared All institutions on a standard ration based on calories Diseases due to dietary insufficiencies will not recur—Dr George A Zeller

(*b*) Mississippi In 1915 15 831 cases and 1,535 deaths, in 1918, 8,340 cases and 746 deaths Decided decrease in number of cases and deaths from pellagra—Dr W S Leathers

(*c*) Florida Distinctly on decrease, of less violent type—Dr F Clifton Moor

(*d*) Virginia In 1914, there were 396 cases, and 249 in 1919 Becoming milder—Dr E G Williams

(*e*) Arkansas Becoming more mild as it is becoming understood that proper diet both prevents and cures most cases—Dr C W Emerson

(*f*) Alabama During eleven months of 1919, there were 660 cases Far fewer cases than five years ago—Dr J H Bowman

(*g*) North Carolina In 1914 831 deaths, in 1918 634, and to October, 1919, 323—Dr P M Register

(*h*) New York City In 1916 eleven cases, 1917 thirteen cases, 1918, nine cases, 1919, four cases—Dr L I Harris

(*i*) Boston In 1919, thirteen cases with fifteen deaths—Dr B W Carey

(*j*) South Carolina Averaging 550 deaths per year in 1916, 1917 and 1918 In November, 1919, during ten months, only 303 deaths Marked decrease both as to deaths and cases reported Disease decidedly more mild and chronic—Dr James A Hayne

(*k*) Louisiana Constant decrease in number of cases from 1915 to date—Dr M W Swords

(*l*) Kentucky One hundred and seven deaths in 1913, 148 in 1914, 144 in 1915, 120 in 1916, 198 in 1917, 148 in 1918 This is one Southern state in which the disease has not noticeably decreased but there have been relatively far fewer cases in Kentucky—Bulletin by Kentucky State Board

(*m*) Georgia Far fewer cases estimated 50 per cent decrease Vital statistics not available for comparison Disease more mild, rapidly lessening

It may therefore be said that, entering on the third decade of its activity in America, the disease is already on the wane as regards the number of cases This is a striking comment when compared with its far larger activity in Italy In the United States this is due to several factors (1) the early and widespread knowledge of the disease due to the conferences on pellagra in South Carolina by Babcock, the widespread discussion in medical societies and literature, and the activity of the various state boards of health, (2) the accent laid by Goldberger and his associates of the Public Health Service on an improper and unbalanced food as a cause, and on a proper and balanced food as a cure, the Thomson-McFadden Commission and the work of Lavinder, Siler and Garrison were aids in the numerous positive and negative facts deduced by their studies, (3) the magnitude of the evidence against any idea or proof of infection or insect transmission, (4) the ease with which good food is both grown and obtained in America, the general prosperity, high wages, and the good food enjoyed by the people, and (5) a wide awake medical profession, eager to learn, cooperating in their early recognition of the disease, and emphasizing proper diet and not indiscriminate drugs as the proper treatment

DECREASE IN SEVERITY OF THE DISEASE

Pellagra is decreasing not only in the number of cases but also in the severity of the types The history of the disease in Spain, France, Italy and America shows four well defined tendencies, after it has passed its crest of severity in each regional epidemic (1) a tendency to decrease in the number of cases, (2) a tendency to increasing chronicity, (3) a tendency to increasing mildness, and (4) a cumulative tendency to extinction In 1911 in northern Spain, the disease was practically extinct, and one could not find in northern Italy in the same year the acute, malignant and early fatal cases so common then and since in the Southern states

The disease is also decreasing in the severity of cases There is much to be said on this point By virtue of the decrease in number, the malignant cases have proportionately decreased It is probably true also that relatively the severe cases are more than proportionately less The bizarre dermatitis so common in the beginning is largely absent I looked for Casal's cravat in northern Italy in 1911 and found it, but such cases were often seen in Ger[illegible] are extremely rare in [illegible] Typ[illegible]

* Read before the Section on Practice of Medicine at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Roberts S R Pellagra St Louis C V Mosby & Co 1912 pp 63 64

2 Pinault L G Canad M Assn J **6** 228 (March) 1916 Rolph F W Ibid **6** 323 (March) 1916

3 Tuttle H K Pellagra in Chile J A M A **69** 2105 (Dec 22) 1917

4 Bartlett H M J Maine M A **5** 8 1915

5 Goldberger Joseph Reprint 441 Public Health Reports p 4 Pellagra Causation and a Method of Prevention J A M A **66** 471 476 (Feb 12) 1916

its dermatitis, fever, diarrhea, prostration and early death is rarely seen now We depended then probably too much on the dermatitis or the history of a dermatitis, to clinch a diagnosis, now we depend on lesser, more general and more constitutional symptoms

Not to have known the disease in its severity is to miss much in its mildness For example, there is a type occurring now among married women which for lack of a better name may be called pellagra in multipara A mother of several children, doing a great deal of hard work, with no vacation or servants, suffering from perineal laceration, constipation, visceroptosis, loss of appetite, and none too varied or appetizing diet —here is a pellagrous candidate Too often flurries of diarrhea, loss of subcutaneous fat, pinkish face and hands, roughened elbows and knees, raw tongue tip, weakness, low pressure and rising pulse, but no definite or typical eruption—this is pellagra sine pellagra (Cases 16 and 21)

Type changes and tendencies at present may be thus summed up

1 Acute typhoid pellagra is becoming comparatively rare

2 We encounter such cases of severe pellagra even less frequently than formerly, as Cases 2, 6 and 10 reported herewith

3 Cases without typical dermatitis, the so-called pellagra sine pellagra, are increasingly common and call for careful diagnostic scrutiny

4 Milder cases with early improvement and evidence of cure are increasingly frequent

The work of Goldberger probably marks the beginning of the final solution of the etiology of the disease We are dealing to all evidence with a nutritional disease, to be placed in the group with scurvy and beriberi Whether the food lack, or food "fault" as Goldberger terms it, shall be a vitamin deficiency, a protein amino-acid problem, a mineral ash disproportion, an unknown food fault beyond the ken of our present knowledge, or a combination of two or three of these dystrophias, future researches must determine Certainly we are forever away from the idea of an unknown infectious agent, and the other idea that the fault is a food, one food, namely, corn The great idea that Goldberger has forced and proved is that the disease can be caused by lack of a proper food balance, and can be cured by a proper food balance His researches may be thus summed up

1 Pellagra was produced in six of eleven white male convicts at the Mississippi State Penitentiary Farm in 1915 on a diet of white wheat flour, corn meal, hominy, grits, corn starch, white rice, sucrose, syrup, sweet potatoes, pork fat, cabbage, collards, turnips, turnip greens and coffee

2 At the insane asylum of Georgia, physicians, nurses and helpers who lived with pellagrins never developed the disease The former lived on a better diet, with more milk and meats, the inmates had little or no milk and meats When the latter had a better diet, the same as the attendants in general they ceased developing pellagra If put back on the former poorer diet, pellagra recurred

3 In the two orphanages at Jackson, Miss, 214 cases developed in 1914 on an unbalanced diet When milk, eggs and meats were added 172 completed the anniversary date of attack without a recurrence There was only one recurrence, and there were no new cases among the nonpellagrins of whom 168 were under observation for one year

4 A study[6] of seven cotton mill villages in South Carolina in 1916 showed that "nonpellagrous households enjoyed a more restricted supply of the foods of the animal protein group, i e, lean meat, milk, including butter, cheese and eggs Increasing supplies of milk or of fresh meat were found associated, one independently of the other, with a decreasing pellagra incidence"

It is noted that all Goldberger's studies have been among convicts, in insane asylums, orphanages, and the homes of cotton mill operatives The question naturally arises as to the explanation of pellagra in rural and urban homes of the well-to-do and the affluent, where food is abundant, varied, and pleasingly prepared, and to be had for the mere reaching and swallowing The twenty-five patients whose cases are reported here are all from private practice, and without exception are pellagrins who had an abundance of well balanced food on their tables, or obtainable, and yet who developed the disease

REPORT OF CASES

CASE 1—Mrs E A, aged 55, well-to do widow, who lived in a rural community and who was peculiar about food, for two years had felt a repulsion toward eggs, meats, chicken, peas and beans She lived alone with her daughter, and ate cereal, bacon, cabbage, spinach and crackers, and drank coffee Often she would eat practically nothing all day She had lost 24 pounds She had eaten no bread, only crackers She said that she just did not want to eat. She had had flurries of diarrhea from September, 1919, to February, 1920 When a frank outbreak of pellagra, with glossitis, discolored hands, and diarrhea, occurred, she was put to bed and given an antipellagra diet, following which there was rapid improvement

CASE 2—Mrs E H, aged 68, wife of a wealthy planter, who lived in a rural community with a luxurious home and food a book lover, who had collected thousands of books, and who had read all her life for years had had peculiar tastes for food She would skip meals, would eat a little fruit corn cakes or salad, had lost 25 pounds, had suffered with insomnia, and had begun taking whisky for sleep She refused wholesome food and for months had lived on knick-knacks coffee and whisky and had read in her room or in bed She developed acute pellagra in February, 1919, and died in two months

CASE 3—Mrs R P E, aged 31 lived in a rural community Her home had burned two years before, and her brother had been killed in France during the war She had worried a great deal was constipated and irregular and peculiar in her appetite, desiring chiefly pork greens cabbage, bread and coffee, and being averse to chicken eggs and milk, though she raised an abundance of vegetables and had her own chickens and cows She developed pellagra in July, 1919, was taken to the hospital, put on an antipellagrous diet, and rapidly improved

CASE 4—Mrs J P, aged 52, who lived in the city, had two years before, in December, 1917, passed through the menopause, during which she had worried a great deal, had suffered from insomnia and loss of appetite over domestic trouble Her family considered her a knick-knack eater She preferred cereal coffee, grits, toast and occasionally a rare steak but was averse to milk and eggs She had frank severe pellagra in September, 1919, which developed into pellagrous insanity

CASE 5—Mrs J K H, aged 53 living in an elegant home in the city, with no work and no exercise, had been enterop-

6 Goldberger Joseph Wheeler G A and Sydenstricker Edgar A Study of the Diet of Nonpellagrous and of Pellagrous Households J A M A 71 944 (Sept 21) 1918

totic and constipated, had a poor appetite, and had lost 20 pounds in weight This patient with mild chronic pellagra, showed marked and rapid improvement on an antipellagrous diet, and gained 20 pounds

CASE 6—Miss M K, aged 42, a housekeeper in the city, who did all her own work for a family of three, said that the preparation of food lessened her appetite She ate bread, syrup, pork, a few vegetables, drank coffee but no milk, and occasionally ate an egg She suffered the first attack in July, 1918, and a second and more severe attack following influenza, from which effect and loss of appetite she had not recovered Her brother said she was a "nibbler" at the table She was emaciated in appearance She developed manic-depressive insanity, and died in six weeks

CASE 7—Mrs B, a widow, aged 50, who was living with her niece in the city in March, 1920 prepared her own food, lived on vegetables, fruit, coffee, a small amount of meat or none Her niece said she had eaten little since her husband's illness, three years before She had had typical diarrhea and stomatitis, her weight had decreased from 170 to 140 pounds There was rapid improvement with rest and proper diet

CASE 8—Mrs J M B, who lived in the city, suffered the first attack in May, 1917 She weighed 92 pounds Hers was a case of typical severe pellagra Under proper food, she gained 30 pounds In November, 1919, she had another attack In January, 1920, she weighed 107, and after hospital rest and food, 127 pounds Her appetite had always been peculiar and variable "The kitchen turned her against eating" She would talk through a meal and eat little Coffee, bread, syrup, pork and greens comprised her diet Most marked improvement was on milk and eggs and all symptoms disappeared

CASE 9—Mrs W L F, aged 38, who lived in a luxurious home in a rural community, who had weighed 120 pounds and had lost 15 pounds, had very little appetite, ate little of meat and eggs, and was easily repelled by food Everything had to be "just so" before she would eat or before she would have a good appetite She gained 13 pounds and was a normal woman after proper food

CASE 10—Mrs F F B, a widow, aged 70, who lived in the city, and who weighed 100 pounds, had lost 30 pounds Her diet consisted of cereals, occasionally an egg coffee jam or marmalade, gravy, rice and grits For a year she had been a devotee of a no meat diet, and used proprietary foods, chiefly from a well known establishment She was notably varied and peculiar as to food The verdict of the family was that she "hardly ate anything," although she had an elegant home and table She had two attacks of pellagra, and died in October, 1919, one year after the beginning of the disease

CASE 11—Miss F N C, aged 43, who lived in the city and who had weighed 103 pounds, had lost 12 pounds She lived with a niece and did all the cooking, and often did without or ate prepared foods She ate meats and eggs very rarely, usually bread, grits, rice, cereals, spinach and cabbage Typical eruption and mild pellagra appeared, followed by rapid improvement on an antipellagrous diet

CASE 12—Mrs J H P, aged 59, who lived in a rural community amid splendid circumstances, had a son in the army She worried much and lost her appetite, had had some indigestion for nine months, and for the last four months had eaten very little Her diet consisted of bread toast, crackers buttermilk, one egg daily, soup, tomato rice, grits and a cereal preparation She was taken to a hospital, and under an antipellagrous diet improved

CASE 13—Mrs C H R, aged 32 who lived in a rural community and whose diet consisted of bread pork, grits, cereals, vegetables, such as cabbage and spinach, rare meat and eggs or milk and whose mind was involved, showed very little improvement on an antipellagrous diet

CASE 14—Mr W G M, aged 55 who lived in a rural community, complained of indigestion weakness and diarrhea He had lost 9 pounds in three months and was suffering from mild pellagra His diet for years had consisted of hog meat two eggs weekly beans corn, syrup spinach, bread and canned beans occasionally He ate meat once monthly, drank no sweet milk, had eaten no mutton in the last six years and drank buttermilk once daily He ate no cabbage This man was financially in good circumstances but economized in everything including diet On an antipellagrous diet, he gained 25 pounds

CASE 15—Miss F S, aged 30, who lived in a rural community, suffered from pellagra amounting to manic depressive insanity Her usual diet consisted of bread, syrup, fat meat, vegetables such as corn, spinach and peas, rare meat and eggs or milk She was a small eater Since suffering from pellagrous symptoms, she had eaten very little food and had been difficult to feed

CASE 16—Mrs A F W, who lived in a rural community, developed pellagra during convalescence from a fourth miscarriage in 1915 She was very nervous, and had taken drugs and morphin to induce sleep She was a most peculiar and irregular eater, would skip meals, and only bite at meals Her diet consisted of breads syrup marmalade and jams She felt a repulsion toward meats milk, eggs and really wholesome vegetables On an antipellagrous diet, this nervous, pellagrous woman of 107 pounds gained 40 pounds, and in 1920 is looking well and runs a large house Her husband, who is a physician, says that when she hesitates concerning her food, the nervous symptoms appear

CASE 17—Mr J C N, aged 62 who lived in a rural community, had suffered from chronic pellagra, which began in 1905 at the aged of 52 He was a rich farmer who worked hard and ate little His diet consisted of breads fat meat, ham, syrup, buttermilk vegetables such as peas, cabbage, turnip greens and potatoes, and little meat, eggs or milk. The disease had made inroads into his strength and weight The symptoms remained in abeyance and he lived until 1918, when he died of pneumonia at 65 He had been under treatment for the last six years, he had taken two eggs daily, from two to four glasses of milk, peas beans, meats and oatmeal

CASE 18—Mrs M L R, aged 42 an elegant woman from a splendid home in the city, who had undergone operations in 1896 and a posterior gastro-enterostomy in 1909, and a cholocystectomy in 1916 Adhesions and contractions of the pylorus with dilatation of the duodenum below had followed She had suffered from constant indigestion, nausea and vomiting, had been repelled by food and had taken morphin for relief of pain Pellagra developed during one of her prolonged vomiting attacks, followed by an attack in December, 1919 She died in February 1920

CASE 19—Mrs J F H, aged 66 who lived in the city in the best of homes and who had the best of food, had always been in her husband's opinion a very light eater She ate batter cakes and eggs or drank a glass of milk for breakfast, ate sparingly of vegetables for dinner, and for supper ate clabber and toast or a biscuit She seldom ate meat Since the war had begun she had had a great deal of trouble with cooks She said preparing food gave her 'cookitis" i e, took away her appetite She had eaten very little the last few months Acute pellagra developed She was seen Oct 22, 1919, and died in four weeks

CASE 20—Mrs H H C, aged 50 a city dweller, who was very nervous and a very light uncertain eater, who picked at the food rather than ate it developed chronic pellagra with no appetite and with mental symptoms She rarely ate meat, eggs or drank milk On an antipellagra diet and rest she gained 25 pounds At first she refused to eat asserting that her stomach would not hold much food, apparently a psychic inhibition to food Never hungry" was a frequent statement

CASE 21—Mrs W M F aged 41, who lived in a rural community, had fairly good nutrition Chronic mild pellagra developed, manifested chiefly by rather continuous dermatitis and nervous symptoms The appetite was fair but she ate no meats rarely an egg, and drank milk She never used sugar, breads, syrup, vegetables and fruits There was improvement under an antipellagrous diet but it was almost impossible to get the patient to eat regularly and persistently Any worry, real or imaginary would destroy her appetite

CASE 22—Mr J K O, aged 44, who lived in a rural community where food was plentiful, ate rather a monotonous diet, and for four months had eaten very little, he was not a large eater at any time He lived on bread, coffee, syrup, vegetables, hog meat and buttermilk, and had lost 14 pounds in weight There was marked improvement under an antipellagrous diet He now weighs 6 pounds more than ever before, and is in active charge of a large farm

CASE 23—Miss M O, aged 30, a city dweller, was 9 pounds below her normal weight She had mild chronic pellagra She had felt a peculiar repulsion toward food since an attack of typhoid fever when she was 23 years old She refused ordinary vegetables, bacon and ham, milk and cheese These things caused vomiting, a purely psychic effect Her sister said she was "a skimpy eater" Her brothers asserted she was weak because "she did not eat enough for a baby" She ate eggs, a little bread fruit and syrup and drank buttermilk. Improvement followed an antipellagrous diet and rest

CASE 24—Mr J W C, aged 74, a city dweller, had had pellagra for five years in the form of an annual spring attack, with increasing weakness He was a rich man, absorbed in business, who worked from twelve to eighteen hours a day He ate canned goods around his stores He was a man who ate lightly and irregularly, drank some whisky daily, and asserted that he was never hungry He died after five years

CASE 25—Mrs C H M, aged 36, a city dweller with severe pellagra, was emaciated and prostrated Her usual weight had been 120 pounds It was 96 when seen March, 1916 From her childhood she had been very peculiar at the table and "finicky" about her food She would not eat meat of any kind not even chicken except occasionally a ham sandwich She never ate eggs, drank milk, or ate wholesome vegetables She was a dietary devotee of syrup, salads, breads, cakes, desserts and butter She believed she had had sore mouth occasionally for years Under antipellagrous diet, she gained 32 pounds, reaching 128 A light attack occurred in the spring of 1919 Her weight now is 150 pounds or 22 pounds more than ever before in her life She eats regularly and freely of all foods she had refused for a lifetime

COMMENT

These cases speak for themselves Not one of the patients ate a well rounded, balanced diet of meat, milk, eggs or wholesome vegetables In Cases 1, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 21 and 22 the patients ate practically the same diet Goldberger used in producing pellagra in the Mississippi convicts, or that the orphanages and asylums previously used There seems, therefore, to be a pellagrous diet In Cases 2, 4, 5, 9, 19, 20, 21, 23 and 25 the patients ate less than this diet, were "skimpy," knick-knack, psychic eaters Case 18 is remarkable in that this patient was emaciated from an average of ten attacks of nausea and vomiting in twenty-four hours It was impossible to nourish her, and pellagra developed under our very eyes in the midst of an unsuccessful attempt to feed her Rolph reports a case of pellagra developing in cancer of the stomach In both cases it was impossible to nourish the patient

Case 25 is worthy of note This woman had all that money could give, was reared in the same environment as her healthy sister and athletic brother, and differed from them in her peculiar and unexplainable repulsion toward the ordinary articles of wholesome diet She sank to 96 pounds, now she weighs 150, drives her own car, and eats all she formerly refused Why she grew with such strange food repulsions, it is difficult to understand

The outstanding facts with regard to these twenty-five pellagrins may be thus summarized

1 Only two of these patients were naturally plump to abnormal adiposity, Cases 2 and 8 The leanness of most of the others was striking Fat people rarely become pellagrous

2 Pellagra develops as easily among the affluent and the urban as among the poor and rural It is the food that is eaten that counts Thirteen were city dwellers and twelve lived in rural communities

3 All of them had the best food With relation to food they may be regarded as of two classes (*a*) one class ate an unbalanced diet, (*b*) the other, not only an unbalanced, but a "skimpy," starvation diet These patients were undernourished

4 As soon as put on a diet which they formerly refused for psychic or imaginary reasons, they ate it continuously, improved and led active lives (Cases 1, 5, 14, 17 and 25)

5 There is apparently among the better classes a small proportion who have a natural or acquired antipathy to a well rounded, balanced diet Is there a dietary hysteria? Some persons pride themselves on never getting hungry Grief, monotony, disease, domestic worries, the preparation of food, constipation are agents in depriving women more than men of their appetites In this series there were only four men and twenty-one women

TREATMENT

1 *Diet*—Here food is of consuming importance, but it is of no importance unless it is consumed Therefore, the dietary cooperation of the patient must be obtained The disease should be named and explained to the patient, and with it the necessity for eating Especial accent should be laid on directions for eating directions and not appetite are to be followed This is one reason why Goldberger has had such good results with his penitentiary, asylum and orphanage cases, these patients have been under control, under institutional routine, and the balanced food has been taken to them, and persistently taken to them month after month Some such remarks as these should be made by the physician to his patient "There are three things about your diet First, we will look after what is brought you to eat Second, you eat what is brought you whether it appeals to your appetite or not If you swallow it, it will go down Nature will do the rest Third, we shall all rejoice at the results" During the attack, or for the first few days, feeding mouthful by mouthful may be necessary Great harm is often done the patient by neglecting to feed during the extreme weakness of the severity of the disease, and just waiting until the patient "feels like" eating Here, less food means more pellagra, more food, less pellagra

2 *Rest*—Pellagrins during the attack or when weak or below their normal weight should be put to bed like a "rest cure" patient, and kept there on a high calory diet until their weight is 10 per cent above the normal if this can be done Food, flat and fat are triple alliterative therapeutics for pellagrins

3 *Liquid Diet*—Chiefly for an acute attack, with "sore mouth," esophagitis, rectitis and difficulty in chewing or swallowing, a liquid diet should be employed To feed all the articles included in the appended list in twenty-four hours gives an intake above 3,000 calories It may be unwise or impossible to feed so much in a given case However, 2,000 calories or above is a good rule, with three meals a day, and milk and eggs between and at night Articles

from the general diet should be added as soon as the condition permits

4 *General Diet*—In general a fresh, lean meat, two eggs, two glasses of milk either sweet or buttermilk, and butter should be eaten daily, along with vegetables and breads to make a well balanced diet The following is a brief outline from which a choice may be made·

Breakfast Fresh fruit or oatmeal, with milk and butter One or two eggs or a meat Grits, bread, gravy Milk or coffee or tea

Dinner A meat of any kind, including roast, steak, mutton, chicken fish, pork game Bread of any kind Vegetables including especially peas and beans, fresh vegetables of 3, 6 10 and 20 per cent carbohydrate content These can vary on different days, potatoes, rice, and 3 per cent alternating with peas beans butterbeans, corn macaroni onions, beets, etc Milk butter, desserts jellies salads

Supper Bread, butter, milk eggs a meat fruit, clabber, cheese, gravy, grits, syrup and jam or preserves occasionally

There are two pocket diet slips that are invaluable for the practitioner who treats pellagra or the patient who has pellagra "Food Values in Household Measures," obtained from Franklin W White, Boston, or Joslin's diet slip, obtained from Thomas Groom & Co of Boston Each is of great service in feeding, and the patient is easily interested The aim should be to feed from 30 to 35 calories to the kilogram of body weight

DIET LIST FOR USE DURING AN ATTACK OF PELLAGRA

Food	Ounces	Measure	Proteins per Cent	Fat per Cent	Carbohydrate per Cent	Calories
Eggs (6)			36	36		460
Milk	48	6 glasses	48	48	72	912
Cream	16	2 glasses	16	96	16	990
Sugar	½	Heaping tablespoonful			8	33
Cocoa	1	Tablespoonful	6	9	11	150
Milk toast	2	2 slices	6		36	180
Oat meal cream wheat	3	3 heaping tablespoonfuls	6	2	20	170
Apple sauce	1½	Heaping table spoonful		1	16	72
Butter	1	3 balls or patties		25		225
Totals			117	217	179	3 142

5 *Psychic Factors*—Regular morning toilets, baths, psychic peace, accent on clean teeth and mouth, the avoidance of exhaustion and encouragement are all essential aids

6 *Drugs*—These are of rather minor importance In the mild cases, particularly in children or in those who eat well, they are usually unnecessary Pellagra is not cured by drugs The time honored arsenic and iron seem of little value It takes food to make blood and flesh and strength Drugs are nearly useless in the diarrhea of pellagra It is probably an effort of nature to rid the system of something Bed, rest and food are the help for diarrhea I have known a weak woman with ten liquid stools a night to drop in forty-eight hours to one or two after bed and feeding

(*a*) The tincture of nux vomica, in doses of from 15 to 25 drops after meals, is of value as an appetizer and stimulant

(*b*) Dilute hydrochloric acid in doses of from 20 to 30 drops is often of value with low gastric acidity or persistent diarrhea, which is often an accompaniment of the diarrhea

(*c*) An endocrine mixed gland tablet, thymus, thyroid, suprarenal and pituitary, seems to help in certain cases with marked somasthenia, hypopressure and muscular weakness

(*d*) Zinc oxid ointment or cold cream aids in smoothing and softening the rough, scaling or inflamed or fissured skin

(*e*) Sedatives and opiates are rarely indicated Acetylsalicylic acid or a capsule containing 1 grain of caffein, 2 grains of phenacetin, and 3 of acetylsalicylic acid aids in relieving the multiple little pains and complaints with which the nervous pellagrin is afflicted

7 *Hospital Treatment*—Pellagrins during an attack do better in a hospital or institution than at home A change of table aids the appetite Eating at regular hours is essential The diet list should be written Surgery should be avoided unless a real surgical emergency arises

CONCLUSIONS

1 Pellagra has been reported from Canada to Chile, and the profession in the Western Hemisphere should be on the lookout for it

2 It has probably caused 500,000 cases and 50,000 deaths in the United States in the last twenty years

3 The number of cases appears to be decreasing, and the types tend to be more mild and chronic

4 Pellagra sine pellagra is of importance because it is more difficult to diagnose than when the eruption is present

5 Goldberger has shown that the disease can be caused by an improperly balanced diet and cured by a balanced diet, with accent on lean meats, eggs, butter, milk and vegetables containing proteins

6 Cases of pellagra occur in families that have abundant food of great variety There are certain people who, although they have such a diet, do not eat it and develop the disease

7 In treatment, diet is of consuming importance, and two diet lists have been given, one for the attack and one general diet The cooperation of the patient must be obtained Drugs are of minor importance, but in certain cases are valuable

20 Ponce de Leon Avenue

ABSTRACT OF DISCUSSION

DR MARVIN L GRAVES Galveston Texas Dr Roberts is too enthusiastic in attaching *quod erat demonstrandum* to the demonstration made by Dr Goldberger The fact that Dr Goldberger produced certain forms of dermatitis of a more or less atypical form in patients submitting to experiments on a limited protein and a high carbohydrate diet does not conclusively establish the fact that this deficiency in diet was the cause of pellagra Those who have attempted to produce the disease by contact with flies that have had access to latrines where pellagrous patients have visited and those who have made other efforts to determine some infectious agent have so far failed, but it appears to me that in the consideration of the subject today one must give the Scotch verdict of not proven' so far as the etiology of pellagra is concerned In regard to the diminution of the activity of the disease I am quite in accord with Dr Roberts I do not know that the types of the disease have changed so much as that there has been a gradual and progressive diminution in the intensity of the disease. A decade or more ago it was quite possible to see in Texas many cases of pellagra presenting the tripod of diagnostic symptoms dermatitis, diarrhea and the many nervous phenomena principally insomnia, with depression The typical cases have been steadily decreasing in number In C we

see two types of cases one abdominal or gastric, presenting a syndrome something like that of gastric ulcer In three cases I have had operations performed for gastric ulcer In two, large gastric ulcers were found Within forty eight hours following the performance of the operation the patient developed an acute active pellagra, with dermatitis, and with marked gastro-intestinal symptoms, so that the diagnosis was plain The second type of case presents a nervous syndrome, consisting now largely of insomnia, of depression with anxiety neurosis, or anxiety psychosis, in which the patient has, first of all, indefinite apprehension and finally a fully developed anxiety, with marked depression and insomnia, frequently going on to a toxic delirium before the termination of the cases

DR ALLEN EUSTIS, New Orleans I have been particularly interested in the diet of pellagra patients on account of the relation of a low protein intake to the incidence of the disease Even before Goldberger called our attention to this fact, I had a patient develop symmetrical dermatitis of the dorsum of both hands and forearms, which was pronounced typical of pellagra by Dr Menage I had placed this patient on a very low protein diet in the treatment of her asthma Receiving relief from the latter condition, she had adhered to a diet of cereals and fruits, as fresh green vegetables were unobtainable at that time of the year I did not hear from her for two and one-half months, when she presented herself at my office with the typical skin lesions of pellagra, but without any of the usual gastro-intestinal symptoms She was given a prescription for 1 grain pills of sodium cacodylate and instructed to eat more liberally of eggs, milk and chicken, as her physical condition denoted decided undernutrition She wrote me in one week that she had only just received the pills as they were not to be had in her home town, and asking if she should take them, as the eruption on her hands was entirely well This seemed so incredible that I wired her to come in to see me at once and I was able to verify the fact that a typical pellagrous eruption had disappeared in one week, without any medication, but only after increasing the protein intake by the addition of eggs and milk to the diet Since then I have had two other cases one a case of visceroptosis and the other a case of arterial hypertension and nephritis This patient developed pellagrous skin lesions, as well as a severe stomatitis, after following a low protein diet without green vegetables for a period of two months Both these patients promptly recovered after adding milk and eggs to their diet None of these patients have had any recurrence Are we justified in stating that these were cases of pellagra? In the absence of the putrefactive diarrhea, suggestive of some infection of the gastro-intestinal canal, I do not consider that they can be termed pellagra" We must decide, first what constitutes pellagra and whether or not the cutaneous lesions seen so often in the disease are evidence of malnutrition and absence of vitamins in the diet, of a person rendered particularly susceptible to a particular form of gastro-intestinal infection from his lowered nutrition On the other hand no one can dispute the fact that Goldberger has proved that from an epidemiologic standpoint the diet is the most essential factor in the control of the disease and its incidence in any given locality Certainly, the disease has practically disappeared from this state since he first advocated feeding a community a full diet and since the physician even in the most remote rural settlements became acquainted with his work That it is not merely a question of protein deficiency is suggested by the fact that I have been advocating the low protein diet in various diseases for the past seventeen years and have had only three patients develop any symptoms of pellagra and each of these withheld green vegetables from the diet

DR. HENRY S PLUMMER Rochester, Minn In the last two years I have seen three cases diagnosed as pellagra that came from the South They all had basal rates from twenty to twenty-four points below normal We have a group of hysterical dysphagias without the history of any other stigmas The patients simply cannot swallow I have seen them strain all their food through a cheese cloth, with no meat in it, for thirteen or fourteen or fifteen years They develop an enlarged spleen I have seen the preliminary diagnosis of cancer made Slip a filiform bougie into the throat, tell the patient to swallow, and that he will be able to swallow the next morning, and I have never seen one that did not They recover fully on a mixed diet The enlarged spleen is definite They have a dry skin, but I have never seen in that group a definite dermatitis

DR GEORGE DOCK, St Louis I agree with Dr Eustis in the fact that there are certain conditions in the skin of the extremities, either trophic disturbances or symmetrical dermatitis that are very difficult to distinguish from pellagra, and sometimes it is impossible to do so, but which are not cases of pellagra In 1909 I visited the Pellagrarium of Rovereto in the Austrian Tyrol, a very large institution, where they had a great many pellagrins To my surprise, none of them had skin changes, and the physicians told me that they never had They said that if they waited for the skin lesions to make a diagnosis of pellagra, they never would make it They based their diagnoses on the condition of the mucous membrane of the mouth, the appearance of the tongue the mental condition, and the general cachectic condition of the patient They cured them all by giving mixed diet One should remember that pellagra is not merely an eruptive skin disease that there are many kinds of dermatitis, affecting the hands, some in deficiency diseases and some in other conditions

DR. W G SHEDDAN, Columbia, Tenn Pellagra is not so modern a disease in this country as we have been taught I recall seeing cases thirty or thirty-five years ago which I am sure were pellagra, cases which were diagnosed as something else then I think many cases occurred in the hands of other men and were overlooked or called something else At least one half of the cases I have seen have shown no dermatitis The initial symptoms are the nervous and mental symptoms In many cases the psychic symptoms are most evident and predominate, I believe that the original pathology is in the central nervous system, and that the gastro-intestinal disturbances come next Many of these patients either die or get well before they ever have dermal symptoms

DR STEWART R ROBERTS, Atlanta Ga The statement of Dr Plummer that the basal metabolic rate is low, is to be expected If one sees great numbers of these pellagrins, they are thin, with low blood pressure, and weak, poor appetite and eat little food I agree with Dr Sheddan in regard to the fact that at the present time, if we wait to base a clinical diagnosis of pellagra on the dermatitis or on the skin condition, we would miss most of the cases of pellagra Before Goldberger came we were more or less helpless before pellagra, particularly the more severe cases We can now promise these patients some definite improvement on the basis of a mixed diet We try to put them on a caloric intake above 3 000 Some of them can go up to 4,000, and it is true, whatever the idea of etiology or diagnosis may be concerning the disease, that with these unfortunate patients, the less food the more pellagra, and the more food the less pellagra and the greater improvement

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Narcotic Dispensaries—Death does not result from sudden deprivation of the drug in the case of a healthy addict—an addict without any therapeutic reason for addiction—a case of cancer painful tic etc, naturally not being included in our consideration as all of these cases are under either suitable institutional or private physicians' care The suffering caused by the sudden deprivation is not as severe as it may appear on the surface and it is of short duration If hospital facilities can be provided, there is no excuse for a public or private narcotic dispensary If they cannot, it might be desirable to make arrangements for personal administration of drugs to addicts as a temporary measure of relief A dispensary where the drugs are dispensed to the addicts for self-administration is so harmful in its effects that it cannot be recommended under any circumstances—S D Hubbard *Pub Health Rep* March 26, 1920

A STUDY OF MALNUTRITION OF SCHOOLCHILDREN *

MAUD A BROWN
KANSAS CITY, MO

This piece of experimental health work was carried on in the grade schools of Kansas City, Mo, in the spring of 1919 Following the influenza vacation, the children of fifty-five grade schools were weighed and measured by the classroom-weight-chart method of the Child Health Organization The percentage of underweight, when computed, indicated that the general estimates as to the prevalence of malnutrition among schoolchildren in the country over were applicable, without exaggeration, to the children of Kansas City

It was determined to take the school that showed the highest percentage of children who were more than 10 per cent under weight by the standard table of Dr Wood, and see what would be the effect of an intensive health service for these so-called "malnourished" children This school was the Lowell School, which showed 41 per cent of its children more than 10 per cent underweight

THE PLAN

Kansas City is fortunate in having an antituberculosis society which furnishes ideal health service for 200 anemic schoolchildren This service

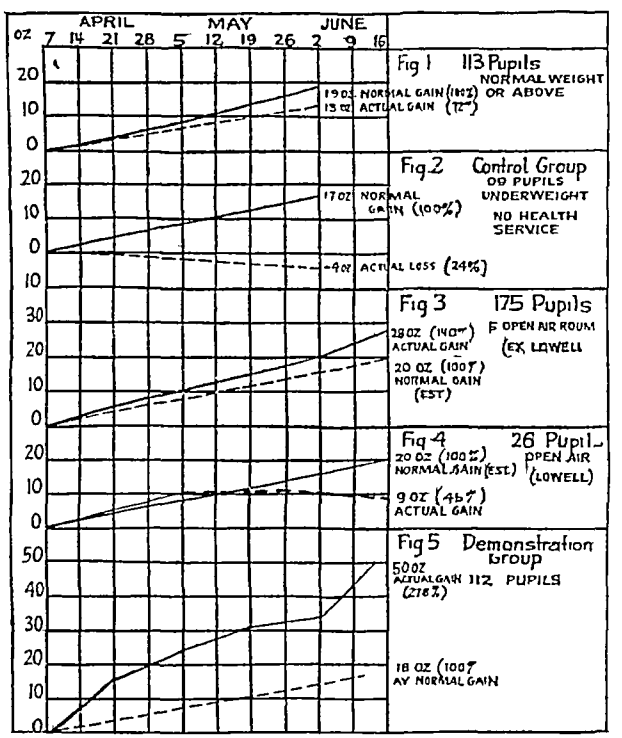

Chart 1—Composite curve

includes medical and dental attention, nurse's service, open-window schoolroom, shower baths, and midmorning and midafternoon lunch, followed by naps The improvement of the fortunate few is so marked as to emphasize the responsibility of the community toward the rest of its malnourished schoolchildren Manifestly the expense of extending this service to all in need of it would be prohibitive for this agency and there was no other source for the supply of the necessary personnel and equipment The antituberculosis society determined to establish an ideal health service for a limited number of pupils, in the hope that the comparative study of results would determine which elements gave greatest return in health for the money expended The health study was conducted by the supervisor of hygiene of the department of physical education of the Kansas City public schools

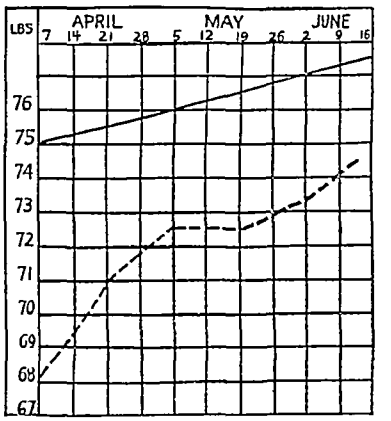

Chart 2—Curve of a boy aged 11 height 55¾ inches normal rate of growth 12 ounces a month normal weight 75 pounds total expected gain 28½ ounces actual gain 100 ounces This was a plain case of undernourishment another two weeks would have put him over the top

Lowell School is located at the corner of Twenty-Seventh and Madison streets, in a residence district The families are those of wage earners ranging from $50 to $200 a month in income The district is almost entirely American

The building is one of the oldest in the city It is brick and frame with cracked and splintered floors and torn wall paper, so old that the best of janitor service is necessary to supply the minimum standards of sanitation The playground is very small, and the rainy day play space in the basement is so small as to be useless

THE METHOD

(*a*) All pupils were weighed and measured, those under weight were examined by the physician for the open air room

(*b*) Blanks for permission of parent for feeding, dental attention and operations on tonsils or adenoids were sent home by the pupils

(*c*) All who returned the permits for school feeding were enrolled in the demonstration group

(*d*) This happened to divide the underweight pupils into two almost equal groups, 112 who were given school feeding and 109, identical in respect to physical condition as nearly as could be determined, who were considered the "control group"

(*e*) The demonstration group were weighed every two weeks, in muslin weighing slips only The control group were weighed once a month in indoor clothing except coats and shoes

(*f*) A trained nurse was employed for this health study who gave her entire time to this demonstration group, visiting every home, carrying the recommendation of the physician and soliciting the cooperation of the mother The home dietary was investigated, and such instructions given the mother as conditions seemed to warrant

(*g*) Midmorning and midafternoon nourishment were given the demonstration group The food was planned to supplement the home dietary, and to supply about half (from 1,000 to 1,200 calories) of the neces-

* Owing to lack of space certain charts and illustrations have been omitted These will be included in the reprints a copy of which may be obtained on application to the author

sary day's ration The principle of "protective feeding," as developed by McCollum of Johns Hopkins University, was rigidly followed Each child received from 1 to 2 pints of milk with cereal and fruit every day The rest of the 1,000 to 1,200 calories was variously supplied in soups, vegetables and sandwiches Cocoa was frequently served, with occasional treats of cookies and milk chocolate The nurse induced the mothers to give the children greens at home The cost of the food averaged 6⅓ cents a meal

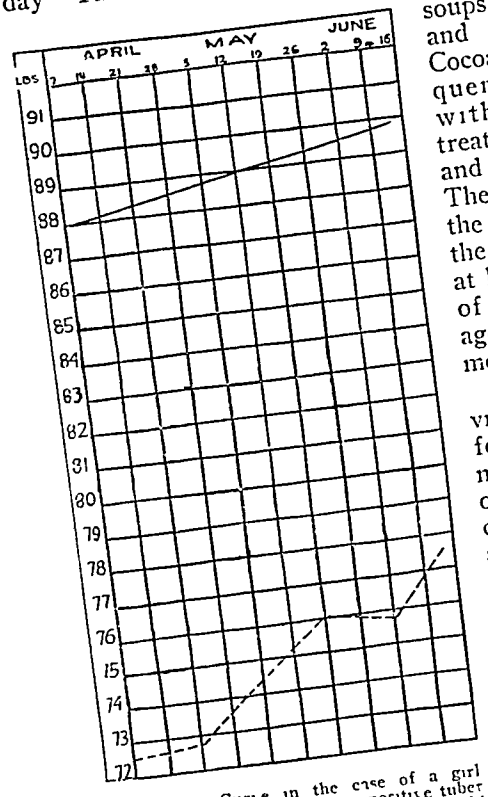

Chart 3—Curve in the case of a girl aged 13 height 58½ inches positive tuberculin reaction d Espines sign fifth dorsal vertebra rise of temperature in afternoon tonsils badly diseased Solid line normal gain 28½ ounces broken line actual gain 80 ounces a gratifying gain in spite of heavy handicap

(*h*) Clinical service was secured for children who needed treatments or operations, especially for tonsils and adenoids

(*i*) A dental chair was set up in the school, and service was supplied free to every child in the group found to be in need of it

(*j*) Instruction in "health habits" was given all pupils in the school, the Junior Red Cross health crusade being faithfully carried on here as in the other schools of the city A first prize of a volley ball and a second prize of an indoor baseball and bat were offered to the rooms which lowered their average of underweight by the greatest percentage

TABLE 1—PHYSICAL CONDITION OF CHILDREN

	Per Cent
Teeth defective	92
Tonsils normal or already removed	28
Enlarged or cryptic not seriously infected	34
Removal advised	37
Removed during period	20
Enlarged glands (cervical)	82
Epitrochlear	3
Thyroid	35
Conjunctivitis	60
Mild	44
Granular	53
D Fspines sign third dorsal or lower	3
Rales	25
Wassermann test positive 2 cases	87
Tympanitic abdomen	
Poor posture	

(*k*) After each weighing, the nurse revisited the mothers of the pupils who had lost weight, and, after the first month, each pupil who lost weight was given an extra cup (½ pint) of milk During the last month each child who had lost weight was given, in addition to the half pint of milk, 100 calories of dates, raisins or chocolate some of the group by this time receiving up to 1,800 calories a day

(*l*) The pupils represented all grades from the kindergarten to the sixth grade The kindergarten pupils had but one feeding a day, because of single sessions, and the upper grade (seventh) did not supply any pupils to the demonstration group

(*m*) *No child was dropped from this group for any reason whatsoever*

(*n*) A curve was kept for each pupil The nurse and the conductor of the experiment kept individual records in order to check possible inaccuracies

The physical condition of the children, as revealed by examination of the physician, the dentist and the corrective specialist, is given in Table 1

The social status of the children as discovered by the nurse in visiting the homes is given in Table 2

Fourteen children failed to make normal gain for the period

Of these, four were in the hospital from four to six weeks for tonsil and adenoid operations They gained after their return 100, 200, 200 and 340 per cent, respectively, as compared with the normal rate of gain for the same period

Three were out with contagious diseases (measles, mumps, diphtheria) for several weeks each The two who returned (after mumps and diphtheria) made 200 and 400 per cent, respectively, for the short time they were in class

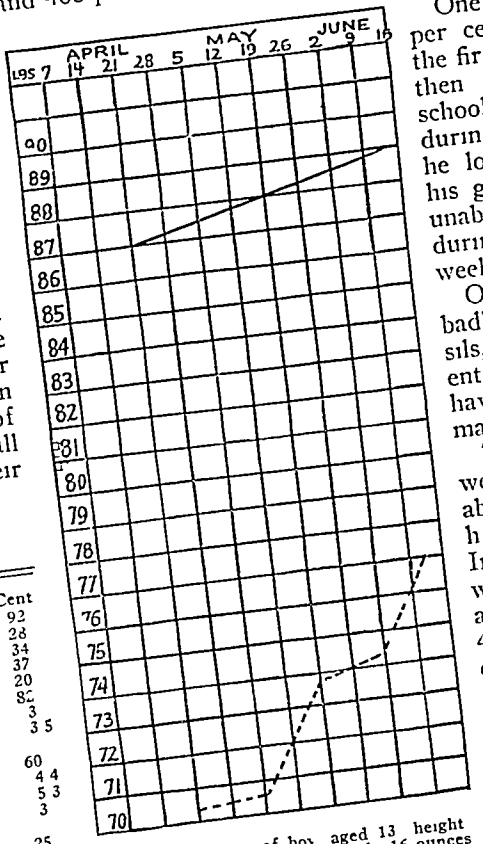

Chart 4—Curve of boy aged 13 height 58 inches normal rate of growth 16 ounces a month normal weight 87 pounds total expected gain 26 ounces actual gain 108 ounces This is an instance illustrating what perfect cooperation will do The boy literally took on a new lease of life His changed appearance was startling

One made 300 per cent gain for the first five weeks, then was out of school two weeks during which time he lost more than his gain He was unable to catch up during the last two weeks

One girl had badly diseased tonsils, which her parents refused to have removed She made little gain

Two failures were directly traceable to adverse home conditions In one case these were circumvented, and the child made 400 per cent gain over normal rate in the last month In the other case the difficulty was insurmountable

The twelfth case was lost because of the natural perversity of the child and her mother Both were untruthful and persistently broke all known health rules This was the only case in which we were sorely tempted to break our rule of dropping no one from the group for any reason The family moved to Chic go at the end of four

weeks, the child having made 50 per cent gain for the month

The thirteenth case was difficult to account for The only adequate reason for failure to gain seemed to be the fact that she had too little rest and play, as she attended a religious school after public school hours

TABLE 2—SOCIAL STATUS OF CHILDREN

	Number
Home	
Owned clear	3
Being paid for in instalments	9
Rented	100
Less than $10 monthly	8
From $10 to $20 monthly	42
More than $20 monthly	2
No data on amount of rent	50
Income monthly	
Good (from $150 to $200)	28
Fair (from $50 to $150)	63
Poor ($50 to less)	13
No data	8
Wage earner of family	
Father	79
Mother (whole or part keeping her away from home)	19
Older brothers or sisters helping	22
Stepfather	3
Grandfather	1
Child himself working out of school hours	1
Health of parents	
Both said to be good	68
One said to be poor	22
No record	22
Nationality of parents	
American born	103
Swedish	1
Italian	2
Mexican	1
Jewish	1
No record	4
Number of rooms in home per members of family	
One each	21
Less than one each	34
More than one each	23
No record	34
Children sleeping alone	9
Children sleeping with others	103
Cleanliness of home	
Good	58
Fair	29
Bad	14
No record	11
Ventilation	
Good	31
Fair	41
Bad	22
No record	18
Water in house	89
No water in house	23
Bath tubs	47
No bath tubs	65

The fourteenth boy absolutely refused to gain The more he ate, the thinner and stronger he became He played on the baseball team and was apparently in tip-top health We decided that he was one of the "naturally thin" children we hear about

THE RESULTS

Chart 1, a composite curve containing five subdivisions, shows the results Figure 1 shows that the 113 pupils of normal weight who were present at both weighings made an average of 13 ounces gain each, or 72 per cent of the normal rate of gain These pupils received none of the school service Figure 2 shows that the 109 underweight pupils of the control group not only made no gain, but actually lost an average of 4 ounces each These pupils received no school health service Figure 3 shows that the 175 pupils of the other five open-air rooms of the city gained an average of 28 ounces, or 40 per cent above the normal rate of gain Figure 4 showed that the twenty-eight pupils of the open-air room who received the same food and physician's services and, in addition, shower baths and rest periods (sleep) after each feeding, but whose nurse was employed for part time only and had little time, consequently, for home visiting, gained only 45 per cent (the normal gain being 100) Figure 5 shows that the 112 pupils of the demonstration group gained 278 per cent, or 50 ounces, each, (the normal gain, 100 per cent for the group, being 18 ounces each) This, added to the 24 per cent loss of the control group, gives an advantage of 302 per cent over the control group

The curve of the "feeders" shows three striking features

1 The initial rise Nearly all the "feeders," no matter what the condition as to teeth, tonsils, adenoids or home care, made an immediate gain, this being before the nurse had had time to reach the homes and before defects of any sort had been corrected No reasonable doubt can exist that this initial gain was the response of the underfed tissues to food

2 The slump in May This was a most discouraging time for all concerned The weighing, May 15, showed fifteen of the group to have lost weight The amount of milk given to each of these was doubled, and 100 calories of chocolate, dates or raisins added to the meals May 19, these had gained, but still more of the pupils had lost By June 2, half the group were receiving the extra food

3 The rise in June During the ten days in June the curve starts upward with the "almost perpendicular" rise which Dr Hendee Smith says may be expected from children after obstructions to proper assimilation have been removed

Several elements enter into the explanation of the May loss and the June gain

(*a*) The weather May had nine sunny days It was a drizzly, cold month, following a few warm sunny April days, whose deceptive promise caused the children to emerge from their winter underwear as from cocoons The beginning of the barefoot season means no more shoes to be bought until next fall's cold weather makes it imperative Many children wear no underwear worthy the name during the summer Tonsils reddened, colds sniffled Small, undernourished bodies had no resistance with which to combat the chill The first warm days of June had much to do, it seems reasonable to suppose, with the hopeful tilt shown by the curve

TABLE 3—WEIGHT OF LOWELL SCHOOL PUPILS ALL ROOMS EXCEPT OPEN AIR ROOM

No	Per Cent
1	63
1	58
1	53
2	36 40
0	31 35
1	26-30
1	21 25
7	16 20
18	11 15
24	6 10
57	0 5
5	Normal
84	0 5
72	6 10
74	11 15
46	16-20
36	21 25
4	26 30

(*b*) The nurse, by superhuman effort, revisited the home of every "loser," and by the sheer force of personality, to which more than to any other element the success of the whole undertaking was due, secured a revival of effort on the part of the mothers Many busy, overworked mothers, supposing no news to be good news, had relaxed their efforts

(*c*) The extra food In some cases the additional milk and the chocolate, dates or raisins added daily

probably furnished just the help needed to start the curves upward

(*d*) Those children who had had defects corrected were just ready to show the benefit of the health service It is unfortunate that the earlier closing of school made it impossible to carry the feeding on till the end of June as originally planned

STUDY AND INTERPRETATION OF RESULTS

A careful study of the results forces the conclusion that the two factors chiefly responsible for the interesting showing are the work of the nurse in securing home cooperation, and the selection of food with reference to supplying the dietary deficiencies of the home on the "protective feeding" plan

One of the most interesting observations was that these children cheerfully stowed away from 1,000 to 1 800 calories in addition to their customary three meals The mothers reported that they were eating more at home also It is probable that the amount of food needed by growing children has been underestimated [1]

No correlation has been found between the rate of growth of these children and any of the social conditions

The time was too short to show the favorable results of the other elements of the health service Doubtless, a few weeks longer would show a decided advantage in favor of those pupils who had defects of teeth and tonsils corrected and adenoids removed

Two facts stand out with paramount significance

1 These children, in spite of adverse conditions and handicaps unremoved, were so desperately in need of food that they made a gain of 278 per cent (normal gain, 100 per cent) or 302 per cent gain over the control group

2 This school, which ranked lowest (fifty-fifth) in the spring, ranked third in September, the difference, beyond reasonable doubt, brought about by nine and one-half weeks of intensive health service

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THERAPEUTIC AGENTS IN CHRONIC NERVOUS DISEASES *

W A JONES, M D
MINNEAPOLIS

Chronic nervous diseases include the various types of mental and nervous diseases, defects, and associated illnesses that are interrelated with the somatic system As approximately 50 per cent of all diseases, of whatever nature are primarily or fundamentally due to mental influence in its broadest sense, we have a basis for methods of treatment The more definitely limited disorders of the nervous system not controlled by mental states are comparatively small in their inception This class may include defects in the structural pathways, and if diseased, they are not uncommonly precipitated by emphasized injuries, shocks or infections

The gradation between organic nervous diseases and diseases of nonnervous tissue is frequently difficult to analyze and differentiate, hence we are led to assume that a complication of chemical and physiologic states exists, rendering a final diagnosis speculative or tentative We now know that a thorough history and an elaborate physical investigation are essential before a conclusion is reached, as both the history and the examination usually lead us in the diagnostic path, or, at least, are suggestive and therefore of diagnostic value

As we study our nervous problems we necessarily become convinced that defects in one or more systems are so closely interwoven that a syndrome of symptoms frequently provides a screen behind which we are unable to go in our efforts to outline a definite scientific diagnosis or prognosis, hence we emerge from our consultation room with a dubious mind We are almost daily confronted with new methods of investigation and research that require the assistance of the internist, or the specialist, with his modern apparatus and his painstaking efforts to exclude or include his theoretical findings The surgeon, with his mind bent on surgical prospects, strives to impress us with his surgical diagnostic knowledge, in order to convince both the neurologist and the internist that, fundamentally, their combined explanations are insufficient And he may attempt to draw from the neurologist's and the internist's intensive studies immaterial and irrelevant conclusions because a pathologic process is demonstrable

The endocrinologist is temporarily in the foreground, and we gasp and speculate as to whether or not he is on the right track He has so many theories to offer and so many deductions to declare that he sometimes obscures a possible diagnosis, or he may clear up some of our doubts by his investigation of ductless glands and his applications of remedies that may be of great value

Then too, the bacteriologist and the serologist confuse us greatly, they know we are all wrong and are willing to admit that they are right, and we bow our bewildered heads before the laboratory phenomena From their intensive studies, we are sometimes almost persuaded to admit that nearly every one may have a little syphilis in concealed areas, on the assumption that this disease has been promulgated through the centuries, yet remains in retirement for the reason that no positive evidences are presented to substantiate this view

Considering all these and other unmentioned possibilities of arriving at a tangible or tentative diagnosis, it seems permissible to conclude that the human race is constructed of poor materials, put together in a disorderly and disorganizable mass The patient, or the case, may be interesting from many points of view, but the individual who presents a multiplicity and a complexity of problems, together with his variegated life, his conglomerate up-bringing, his environment, his occupation and his social status, is really the one for our first consideration It is not astounding that he baffles us, and tempts us to treat him for what he is not In spite of all these mishaps, the psychiatrist and the neurologist have demonstrated their worth and distinction, based on the accomplishments and the elevation of their art in the past three or four years And they seem destined, ultimately, to occupy a higher plane in medicine than has been their lot heretofore The field of the psychoneurologist has been for many years the dumping-

1 Lusk Graham The Fundamental Requirements of Energy for Proper Nutrition J A M A **70** 821 (March 23) 1918 The Metabolism of Growing Boys editorial ibid **71** 908 (Sept 14) 1918 Olmstead W H Barr D P and Du Bois E F Metabolism of Boys Twelve and Fourteen Years Old Arch Int Med **21** 621 (May) 1918

* Read before the Section on Nervous and Mental Diseases at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

ground for undiagnosed disorders, but today he is the watcher of the melting-pot of diseases With all of these recognized distinctions that have been showered on him, does he actually know how to treat his psychoneurotic patients, and why does he so persistently cling to the old methods of treatment, unless it be that he admits that the majority of his patients are studies almost beyond his comprehension?

Among the many modes of treatment that have been suggested to us, rest seems to be of uppermost importance It is common knowledge that many of our neurologic and psychiatric people are told that they are simply nervous and that what they need is a life filled with interesting and diverting occupations A number of them are sent on long and arduous trips in the belief that travel and change of scene, and life in the open air, carried on in a strenuous manner, constitutes the most highly beneficial treatment that can be employed Of these, many come back to occupy the same place they held before this unwarranted method was carried out It is quite true that in a few instances a strenuous life, provided it is well regulated and well ordered, among the types who are sufferers from nervous irritability, does help them remarkably An investigation of their former life shows they were sedentary and that their minds were glued to routine channels and their bodies to an office chair This type of man has a one-track mind devoted only to business, to which he applies himself overassiduously, and he provides no escape for his dissipated energies He becomes stagnant and stale, physically, nervously and mentally Put him under proper muscular discipline, regulate his habits, and sweat out the bankrupt skin and flabby muscle accumulations, and clean out his gastro-intestinal tract by normal physiologic methods, and he comes out clean, wholesome and well These cases, of course, must be carefully selected, but a large number of patients of this type are congenitally or constitutionally inferior, and need a prolonged rest in a suitable environment The tendency of the day is to have these people rest for a brief period and then get them up and push them about This can be accomplished only by a skilled attendant, and often the result is lamentable Give them a longer rest period, add to their diet, and see that they are rested, not only nervously but mentally Then, through a gradual process of exercise and outdoor life, they come back by degrees to a condition approaching a normal state It is among this class that we get those who have never been instructed as to the care of themselves, who know, indeed, nothing about ordinary health measures They become blockaded in their muscular, arterial and glandular systems It is among these people, too, that many cases of chronic invalidism are found, mainly because their condition was not recognized early and they were not put in bed with a definite object in mind We see, too, many instances of profound depressive states where a timely suggestion would put them to rights And these people, too, instead of being worked inordinately, physically and mentally, are the people who need a long, peaceful and well-ordered rest in bed

The developing dementia praecox patient, or the constitutionally inferior individual who has been crowding his life with all sorts of work and pleasure, with irregular hours and without sufficient rest, is the one who very soon shows his limitations, and his reconstruction requires excessive patience and a carefully directed line of treatment before he shows a prospect of improvement Unfortunately, among this class are the people of comparatively small means, or those who, perhaps, have dissipated their finances as well as their physical strength, and who are unable to carry out a comprehensive or a well-adjusted scheme of living We may, in many instances, be obliged to resort to halfway measures in order to meet the circumstances of the individual, and not infrequently they can be restored to a fairly balanced life and permitted to engage in occupations less strenuous

Exercise, in its various phases, is often carried too far, because the life of the individual has not been accurately analyzed and his exercise suited to his capacity Sending a mentally defective person to a gymnasium with some carelessly offered suggestions as to exercise is to be deprecated Frequently the overexercise of people who have just recovered from *minor or grave* infectious disorders, and who have an inherent constitutional defect, is detrimental rather than beneficial, and the exercise becomes a dangerous punishment rather than a relief

The question of foods is more important than we are accustomed to believe One rule holds good, however—that is, before a process of diet is inaugurated, the patient should be cleaned up inside and outside as well, and then it should be the function of the physician to put the gastro-intestinal tract into such order as will permit the individual gradually (and sometimes rapidly) to accustom himself to eating anything that is within reason Too careful dieting of the average man is a waste of time Almost any patient can be fed, and even forcibly fed (that is, be urged to eat) anything and everything that is good for him, while another man who goes about with a moderately poor diet list and a book on calories under his arm, and a fear and apprehension of food in his head, not only suffers himself, but brings suffering on his immediate associates

Baths are much overrated, unless they are applied for some specific purpose, such as a prolonged bath for an acutely excited patient It may be said, in passing that the average person does not know how to keep himself clean, and therefore a regulation of his bath toilet is not only beneficial from the point of cleanliness, but serves to improve his skin and muscle activity The ordinary warm bath and cool spray and the Scottish douche are applicable to many, and they are among our best therapeutic agents When we send our patients to resorts for baths we are simply transferring the individual from one climate to another, and perhaps by force of example he bathes, as he should, more often than is his custom We get him out of his old environment, he is taught how to employ his time, and he looks forward to his common, daily, ordinary bath with pleasure because it produces comfort and ease But most baths given in a routine manner, as is generally practiced at bath places, are more or less valueless They are on a par with the drinking of so-called mineral water and salt water, the beneficial result consists mainly in the larger intake of water than is practiced at home

Massage and its adjuncts are fads in the majority of instances, or they are ordered simply to employ and take up the time of the person, who, when he reaches a certain point, has little or nothing to do or who declines to take a normal amount of physical exercise

The average man who practices massage as a profession is not a very great help to the neurologist He may be trained in his specialty, but he is not trained in his mind, and he assumes that massage is the one and only factor in the treatment of disease, just as the new schools of therapy (the osteopathic and the chiropractic) claim to accomplish marvelous results irrespective of other methods of treatment It is undoubtedly true that these so-called practitioners do much good, because they have the knack of inspiring the patient with the wonderful results of their treatment And yet, who has not seen the disastrous results following the indiscriminate prescribing of massage in any of its forms?

Following this line are the newer cults who practice strange and inexplicable forms of healing They employ suggestions, but not the suggestion based on the scientific method of the neurologist Their system of analysis is inadequate, to say nothing of being unscientific Their methods of treatment are bolstered up by all-impressive notoriety backed by the newspapers and heralded from mouth to mouth by the credulous Occasionally a medical man sees the application of suggestion and healing by his impressiveness, and he seeks a wild and remote spot and from this point he permits to leak out the fact that he is a wonder Within a remarkably short period of time the defectives and the chronically, constitutionally inferior people hear, with widely open ears, of his wonderful cures It is related that one man in an Eastern state, after graduating from a well-known Eastern university with a full-fledged degree of M D, established a few barrels of concoctions, gave his awestruck patients a rapid ocular examination, and sold them a bottle of medicine for a price that would be acceptable as an ordinary fee for the average medical man He finally grew tired of attempting in any way to analyze his patients, and simply gave them a rapid glance, followed by the well-known bottle Eventually the crowds became so great that he issued "privilege" permits (for a substantial fee), in order that the patient should not be too long detained in the acquiring of his bottle of water and herbs Other healers have profited by the credulity of the public and have practiced their unholy schemes with financial benefit Now the country is overwhelmed by the so-called "Divine Healer," who admits that Christ practiced the healing art and produced remarkable cures, but that for nearly 2,000 years the art was lost until it appeared in him while yet a child He goes from city to city, and, with the aid of a devoted churchman, he fills the churches with the lame, the halt and the blind, and, offering a prayer, he lays his hands on these poor derelicts He heals them without money and without price, accepting what is donated by his grateful recipients, and it is said, without fear of contradiction, that he makes a very good living

When we come to the final analysis of the whole situation, and the treatment of chronic nervous diseases, the personal influence of the man in charge has much to do with improvement and recovery, provided he is endowed with the qualities of a disciplinarian and the courage of his convictions after he has made a thorough and careful examination and has outlined a course of treatment that is right for the individual The mere fact that people have faith in their physicians is confirmed all over the world, and when they are presented with a proposition put in a plain, common-sense and direct way, the cures of their physician far exceed all of the cures that are effected by the faker and the charlatan But the physician's inordinate modesty and his ethical sense prevent him from acquiring a widespread influence which might be of great benefit to others who know nothing of him, his methods, and the application of the scientific mind to the treatment of disease

SUMMARY

If it were within the power of the neurologist to treat the rich as well as the ordinary classes, they should be given the same strenuous treatment This perhaps will not appeal to physicians generally, as it would mean a vast reduction in their fees But, taking the majority of patients who consult the neurologist and psychiatrist, isolation from their former surroundings, confinement in a well-ordered hospital, and the prohibition of visitors should be rigidly adhered to Nervous and mental patients do better when they have been regulated by correction of their physical disabilities and forced to follow a definite mental disciplinary line of treatment This includes all that may be said of enforced rest, not for weeks, necessarily, but perhaps for months These people come to us depleted in their physical and nervous forces, and a period of rest is needed to balance the years of bad living that bring them to the house of the physician The establishment of order by discipline applies equally well to the physical as to the mental attitude of the patient, and this can be done successfully only by one who is trained for this work It is better to make a few mistakes through overdoing this method of treatment than to make many mistakes by underdoing it

Baths of simple type—warm tub, cool spray or Scottish douche—are of more value than many drugs

Exercise of the graduated type during the convalescent period is of tremendous value, provided it is carried over many days and weeks and with but moderate increase in the time given to such exercise

Sufficient examination should be made from time to time to assure the physician, as well as the patient, that nothing important is overlooked The ordinary routine visits must be suspended at intervals to make this impression lasting

One person should be responsible for the patient, and only minor details should be left to subordinates The patient should be left alone, and without a special nurse, as soon as possible, otherwise he becomes dependent on the nurse not only for his physical but for his mental habits

It has been found that massage is not absolutely essential either to the patient's comfort or to his improvement—that his state of mind and his attitude toward himself and others evoke sufficient mental activity to keep him physically fit

The coddling of patients should be eliminated Giving way to the wishes of the patient, when we know that doing so is detrimental to his progress, is a backward or retrogressive step They should all be held firmly in hand by the personal influence of the attending physician, and this rule should not be relaxed until convalescence is well established

Occupation, unless it is carried on by a trained and skilled worker, is of very little value, and means only the use of time which might be employed in a more profitable manner

Many patients require a firm, guiding hand Others require the influence of a strong and dominating will, together with mechanical or drug restraint, and con-

finement in a suitable room If this method of treatment is begun early in selected cases, the recovery is much more rapid and satisfactory

ABSTRACT OF DISCUSSION

DR FRANK R FRY, St Louis The neurologist must support himself by reliable internists With data thus obtained he can decide the physical and the psychic side of each situation that he is handling By checking up our cases carefully from the physical side, we can more readily determine how to handle them from the psychic side Compared with this the technic of a rest cure is of secondary importance

DR ROSS MOORE, Los Angeles The suggestion of not having a special nurse is a very important one not allowing the patient to be treated, but to have his mind focused on what he himself has to do in order to get well I do not like massage, except when a patient is so physically run down that he needs it for physical reasons Patients get the idea that massage or hydrotherapy, or what not, will make them well Along the same line is the question of relaxation

DR C R WOODSON, St Joseph, Mo It is hard to lay down a set of rules by which to treat nervous men and women Rest is excellent in the treatment of some patients and is desirable In some cases continuous rest is not desirable In some cases it is impossible for a time to get rest and no one has ever shown us how to get it A business man who has broken down and is badly depressed must be taken care of and exercised by an entertaining nurse, one who can divert the patient A maniacal, badly depressed patient, with elevation of temperature, acceleration of heart action and in a constant state of muscular and mental agitation must be looked after constantly Feeding is necessary For a patient who will not eat regularly, tube feeding is necessary If a patient who is badly depressed is left alone, he will kill himself, and this is not to be desired A maniacal patient should not be left alone as he will bruise himself on the walls or bed, will expose himself by getting the covers off his bed or getting on the floor and will contract pneumonia As to filling a patient with drugs no neurologist or internist will want to do this, as it will not have the desired effect It is impossible to lay down a set of rules for the treatment of insane patients Persons who suffer from a mild neurosis may be treated as Dr Jones suggests A person who can divert a melancholia patient and who can get his mind off of himself, who will go walking with him, will be good for him If you lock the melancholia patient up and tell him he must rest, he will not be satisfied If you shut out his friends he will not be satisfied

DR H CLIMENKO, New York One form of psychoneurosis has baffled me This is the anxiety neuroses with marked vasomotor symptoms following a psychic trauma This neurosis occurs usually in middle aged people, both men and women The patient is really not insane He cannot adjust himself to his environment These people are always brooding over the wrongs done to them Every time they think of the psychic trauma they become covered with a cold perspiration, develop a rapid pulse, and frequently irregularities of the pulse due to extrasystoles may be present I have succeeded in curing a small number of these patients by introducing new interests in life These interests were always of an ideal character The large majority of these people were not amenable to any known form of treatment

DR W T WILLIAMSON, Portland, Ore The point at issue is simply the question as to the particular quality and character of the patient One individual requires a certain form of treatment, while another person with exactly the same trouble will require a method of treatment which is exactly the reverse of that employed in the former case Rest is, perhaps, most generally necessary for those whose nervous system is run down, and very often it is required that this rest be prolonged, the patient carefully watched and treatment carried to the degree set forth by Dr Jones Experience has shown, I believe, that rest, properly watched, is the most helpful form of treatment for that class of people called neurasthenics, and that extremes of treatment should be employed only in those cases where we have more definite psychic derangements Rest carried to the extreme, which was opposed by Dr Woodson, would, of course, be wrong Rest can be abused

If a patient who requires watchfulness to protect him be deprived of a special nurse while having that rest the results of rest would not only be nullified but the patient himself would be exposed to additional dangers We must not have a general system of treatment for any disease The physician who treats a disease on the basis of its name is bound to blunder We must simply take the individual as we find him, forget for a moment the name of the disease from which he is suffering, and treat him according to the conditions found, not following any stereotyped methods

BOTULISM FROM CANNED BEETS

REPORT OF CASES AT FLORENCE, ARIZONA

W G RANDELL, M D
FLORENCE, ARIZ

In this outbreak of botulism the food at fault was undoubtedly commercially canned beets in tin containers, as they were the only article of food eaten by all of those who died The other canned foods—corn, nominy and string beans—were all thoroughly cooked after being taken from the can, but the beets were taken from the can and served with a little vinegar poured over them No offensive odor was detected on opening the can of beets At the noon meal, May 12, there were three Indians, two white men and Mrs Lyles One Indian did not eat any of the beets He was unaffected and is well today Mrs Lyles only tasted them to see how they were, as she does not like beets The two Indians and the two white men who ate beets at this meal died The Indians were not there for the evening meal What was left of the beets were served that evening, and Charles Reynolds, who was not there at noon, ate most of them Mrs Lyles is certain that the four children ate some, but very little Unfortunately, none of the beets were left The empty can was thrown out on the ground and recovered later Investigation of the dried juices in the can is still progressing

It is to be hoped that out of the research work being done at present, some effective treatment may be perfected As yet, the antitoxin is of little or no effect and supportive treatment is very discouraging as evidenced by the history of the last two who died, one lingering five days and the other six, their progress being so slow that I was encouraged to think that nature might be able to eliminate the toxins

REPORT OF CASES

CASE 1—G O Brown, aged 27, weight 160 pounds a strong, healthy man, came to the Pinal County Hospital May 13 about 7 a m accompanied by Mr E Lyles He complained of dimness of vision, diplopia (in order to see clearly he had to close one eye) slight headache and a feeling of oppression in the epigastrium The pupils of the eyes were slightly dilated, and there was little or no reaction to light or accommodation His gait was slightly staggering, he complained of some difficulty in swallowing and in speaking he had difficulty to articulate clearly He was pale and the expression of his face anxious Earl, that morning before daylight he had left the house to attend to some stock and in returning, could not walk very well, and part of the way came back on his hands and knees I suspected the condition and urged him to stay in the hospital

then, but he insisted on returning to the ranch for a short time On the way, he was nauseated and vomited several times He was the only one of the five who vomited or had any pain He was given 2 ounces of magnesium sulphate I went to the ranch in order to see Jose Pablo, one of the Indians Brown was looking about the same He was lying down About noon, he came into the hospital and, from then on, his progress was steadily worse The pulse was strong and full until the last few hours, not above 100 The temperature also was most of the time normal and at the highest, was 101 He continually became more restless, throwing himself from side to side in the bed There was no diarrhea The difficulty in swallowing increased until by Friday night it was almost impossible, and completely so by Saturday morning We administered saline enemas about every three hours to maintain body fluids The voluntary muscles of the body seemed partially paralyzed, though up to thirty-six hours before death the patient could get out of bed The last twenty-four hours, the cervical muscles seemed to be paralyzed and, when he would roll from side to side of the bed, he would grasp his hair and pull his head into a comfortable position During the last twenty-four hours attacks of the cyanosis and respiratory failure came on with increasing frequency, until he died at 1 p m The last twenty-four hours, there was paralysis of the anal sphincter and he could not retain fluids

CASE 2—Jose Pablo, an Indian, aged about 18, was taken sick at the same time as Brown and Lyles I saw him at noon of the 13th He refused to go to the hospital and was later taken to an Indian village I saw him only once At that time he was completely prostrated he could not talk the throat was paralyzed saliva flowing from the mouth, and he had to raise his head with his hands The cervical muscles were paralyzed The pupils did not react to light or accommodation and they were slightly dilated When asked if he had double vision or difficulty in seeing, he answered in the affirmative He suffered no pain and died some time the following night

CASE 3—John Robinson an Indian, the third man to die was about 30 years of age, and weighed about 150 pounds He began to feel ill Thursday morning but kept on working until night I saw him Friday morning at his home He was lying down but got up and walked about quite easily with a slight stagger He complained of diplopia dimness of vision, and slight vertigo He could talk, but articulation was not distinct There was some difficulty in swallowing The pupils of the eyes were slightly dilated, there was no reaction to light or accommodation I saw him again Saturday morning He was weaker he could hardly swallow and his speech was impossible to understand There was a flow of ropy saliva which he was continually wiping out of his mouth The pulse was 90 temperature normal Sunday morning I persuaded him to come to the hospital, as I expected to obtain a supply of antitoxin With assistance he walked from the automobile into the hospital Sunday his temperature was slightly subnormal all day The highest pulse rate was 118 He was given enemas of physiologic sodium chlorid solution every three hours and retained them until 2 p m Bowel movement became involuntary He was not given antitoxin From then on physiologic sodium chlorid solution was injected under the skin He was very restless At 11 p m, I passed a stomach pump and gave 8 ounces of equal parts milk and water The fluid may have caused pressure on the diaphragm, or the passage of the tube may have been a shock to the already exhausted sympathetic nervous system Anyway, he collapsed and died about fifteen minutes later He was conscious almost to the last

CASE 4—Mr L Lyles, aged 48, weight 158 pounds, came to the hospital at 7 a m Thursday, with G O Brown He also complained of dimness of vision and diplopia The pupils were slightly dilated and did not react to light or accommodation He complained of some weakness, his gait was staggering his speech was thick and he had some difficulty in swallowing He was given 2 ounces of magnesium sulphate with good results He went home with Brown and returned with him to the hospital about noon Paralysis of the pharynx, esophagus and cervical muscles was progressive but slow, the pulse was full and strong, and most of the time under a hundred Monday, it went to 120 The temperature was normal most of the time, but once, Sunday evening after an infusion of 500 c c of physiologic sodium chlorid solution, it rose to 101 4 I succeeded in getting antitoxin from Miss Jane Ryder of the state health department and gave him 10 c c Sunday at 3 p m and again Monday at 8 a m with no effect in the progress of the disease The last twenty-four hours, there was considerable cyanosis and difficulty in breathing The patient was conscious and realized that he was dying The last twenty-four hours, bowel movement was involuntary Up to within a few hours of his death, he was able to rise in bed, but could not control the cervical muscles and had to lift his head about with his hands He died at midnight, Sunday

CASE 5—Charles Reynolds, aged 21, weight about 160 pounds first complained of symptoms Thursday morning, but worked most of the day His case progressed much more slowly than any of the others so much so that I thought his condition might possibly be due to hysteria The temperature was normal and the pulse 80 full and strong He came to the hospital Saturday at 11 a m The eye symptoms then were well developed, diplopia no reaction to light and accommodation, pupils slightly dilated He was having some difficulty in swallowing but was drinking all of the milk and eggs he wanted and continued to do so until Sunday night Monday, he took 3 ounces of milk He was given physiologic sodium chlorid solution by proctoclysis to maintain the body fluids At 4 p m, he was given 10 c c of antitoxin and at 8 p m 10 c c more The temperature after the second antitoxin injection went to 100 6 but dropped to normal in a few hours Tuesday he could not swallow at all but aside from the distress in the throat and the necessity for frequently clearing the mouth of the profuse, ropy saliva he rested very quietly He had at no time any pain Tuesday he gradually became more cyanosed and restless At 2 p m, he was given 30 c c of the polyvalent antitoxin but with no effect At 6 p m he could no longer retain enemas, and bowel movements were involuntary Tuesday night he became more restless, very anxious and distressed until 5 a m Wednesday morning when he died He was conscious almost to the last

CASE 6—Mrs Lyles complained of difficulty in swallowing and slight dimness of vision which began Friday This continued, with severe prostration for seven or eight days

FOOD EATEN AND RESULT

	Beets Raw	Corn Cooked 30 Min	Beans Cooked 1 Hr	Hominy Cooked 1 Hr	Milk Raw	Jam Raw	Meals May 12 1920	Result
José Pablo	+	+	+	0	+	+	B and I	Ill May 13 a m died May 14 a m
John Robinson	+	+	+	0	+	+	B and L	Ill May 13 a m died May 16 11 45 p m
3d Indian	0	+	0	0	+	+	B and L	Well
4th Indian	0	0	0	0	+	+	B	Well
G O Brown	+	+	+	+	+	+	B I and S	Ill May 13 died May 16 2 30 p m
Charles Reynolds	+	0	0	+	+	+	B and S	Ill May 13 died May 19 5 a m
E Lyles	+	+?	+	+	+	+	B I and S	Ill May 13 died May 17 11 30 p m
Mrs Lyles	0	+	+	+	+	+	B L and S	Well
Joe Lyles 6 yrs	+	0	0	+	+	+	B and S	Well
J W Lyles 11 yrs	+	+	+	0	+	+	B and S	Well
Ida Lyles 4 yrs	+	+	0	0	+	+	B and S	Well
Margaret Lyles 9 yrs	+	0	0	+	+	+	B and S	Well

when the symptoms gradually subsided She was given 10 c c of antitoxin on Sunday Whether her condition was due to poison or to hysteria is difficult to say, but she is not of a neurotic temperament and has been very self-possessed and I am inclined to think that she was slightly poisoned

Three of the four children also complained of trouble in swallowing, and they were so prostrated that in walking about their feet seemed heavy The oldest girl Margaret was so weak that she had to be lifted out of the bed when she wanted to get up even ten days after the poisoning When she left here she could not step into the car without assistance She is about 9 years of age

CHARACTER OF TREATMENT

Treatment, aside from the injection of the antitoxin, was wholly supportive I found after observing Brown's condition and the use of codein and morphin to quiet him, that if supplied a sufficient amount of water, either by proctoclysis or hypodermoclysis, the restlessness was so much relieved that opiates were unnecessary Strychnin, atropin, digitalis and strophanthin were administered whenever indicated but, apparently, with no effect Because of the effect that pituitary extract has in stimulating involuntary muscle action, I thought it might be of some value in relieving the paralysis of the pharynx and esophageal muscles, and in three cases I administered it every four hours, but with no beneficial effect and possibly some aggravation

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION W A PUCKNER, SECRETARY

POLLEN EXTRACT PREPARATIONS (See New and Nonofficial Remedies, 1920, p 226)

POLLEN ANTIGEN-LEDERLE (FALL TYPE)—A liquid obtained by extracting equal parts by weight of dried pollens of ragweed, goldenrod, wormwood, and maize (Indian corn) by a vehicle of 67 per cent glycerine and 33 per cent saturated solution of sodium chloride It is standardized so that each Cc contains 14 000 pollen units, a pollen unit has been arbitrarily chosen by Koessler, Noon and Freeman as the equivalent of one-millionth gram (0 000001 Gm or 0 001 Mg) of pollen The Hygienic Laboratory has prescribed no U S Standard of Potency The antigen after preparation is made into fifteen different dilutions by the addition of a proper amount of the glycerine-sodium chloride solution diluent

Actions and Uses—See general article, Pollen Extract Preparations, New and Nonofficial Remedies 1920, p 226

Dosage—The product is supplied in fifteen different doses Each dose consists of 0 1 Cc of the respective dilution Accompanying each dose is a vial containing 9 Cc of sterile water with which to make the pollen antigen of isotonic strength immediately before administration For prophylaxis, the complete series (doses 1 to 15) containing progressive amounts of pollen protein should be given beginning about six weeks before the hay-fever season For treatment of an actual attack of hay-fever, fewer doses are generally sufficient

Manufactured by the Lederle Antitoxin Laboratories New York No U S patent or trademark

Pollen Antigen Lederle (Fall Type) Series A—Marketed in packages of five vials containing for each consecutive dose (numbers 1 to 5 inclusive) 2 5 5 10 20 and 25 pollen units respectively and five vials of sterile water with which to make the proper dilution of each dose

Pollen Antigen Lederle (Fall Type) Series B—Marketed in packages of five vials containing for each consecutive dose (numbers 6 to 10 inclusive) 30 50 75 100 and 150 pollen units respectively and five vials of sterile water with which to make the proper dilution of each dose

Pollen Antigen Lederle (Fall Type) Series C—Marketed in packages of five vials containing for each consecutive dose (numbers 11 to 15 inclusive) 250 375 500 750 and 1 000 pollen units respectively and five vials of sterile water with which to make the proper dilution of each dose

Pollen Antigen Lederle (Fall Type) Complete Series—Marketed in packages containing 15 doses as described in Series A B and C above

Pollen Antigen Immunity Test—Diagnostic Test for Fall Type Hay Fever Lederle—Consists of 0 01 Cc of No 15 dilution of pollen antigen Lederle (fall type) It represents 100 pollen units of the combined pollen protein May be used cutaneously or intradermally

OVARY (See New and Nonofficial Remedies 1920, p 201)

Whole Ovary-H W D—Whole ovarian glands of the cow, including the corpora lutea, selected, freed from extraneous matter and dried *in vacuo*

Actions and Uses—See general article, Ovary, New and Nonofficial Remedies, 1920 p 201

Dosage—5 grains or more daily modified to meet the requirements of the special case. Whole Ovary-H W D is sold in the form of tablets only (see below)

Manufactured by Hynson Westcott & Dunning Baltimore No U S patent or trademark

Whole Ovary Tablets H W D 5 grains—Each tablet contains whole ovary H W D 5 grains

Whole Ovary H W D is a yellowish powder having a peculiar odor it is partially soluble in water

One part represents approximately 5 parts of the fresh animal ovary

BENZYL BENZOATE (See New and Nonofficial Remedies, 1920, p 49)

Benzyl Benzoate (Abbott)—A nonproprietary brand of benzyl benzoate complying with the N N R standards

Abbott Laboratories Chicago No U S patent or trademark

Elixir Benzyl Benzoate (Abbott)—A solution compounded of 20 per cent benzyl benzoate (Abbott) 70 per cent. ethyl alcohol absolute flavoring and water to make 100 per cent

Dosage—20 drops to 2 teaspoonfuls well diluted with water or milk May be repeated in one half to one hour

Tablets Benzyl Benzoate (Abbott) 2 grains—Each tablet contains benzyl benzoate (Abbott) 2 grains with charcoal as a vehicle

Dosage—2 to 5 tablets at intervals of one half to one hour continued to effect (up to 20 grains) Follow each dose with a hot drink—water or milk

Benzyl Benzoate (Fritzsche)—A nonproprietary brand of benzyl benzoate complying with the tests and standards for benzyl benzoate

Fritzsche Brothers Inc New York

Benzyl Benzoate (Merck)—A nonproprietary brand of benzyl benzoate complying with the tests and standards for benzyl benzoate

Merck & Co New York

Benzyl Benzoate (Organic Salt & Acid Co)—A nonproprietary brand of benzyl benzoate complying with the tests and standards for benzyl benzoate

Organic Salt and Acid Co New York

FERRIC CACODYLATE—Ferri cacodylas—Iron Cacodylate—A ferric salt of cacodylic acid containing from 39 7 to 44 9 per cent arsenic (As) (See New and Nonofficial Remedies 1920 p 44)

The following dosage forms have been accepted

Ampules Ven Iron Cacodylate, 0 03 Gm (½ gr)—Each ampule contains iron cacodylate 0 03 Gm (½ gr) in 1 Cc

Ampules Ven Iron Cacodylate with Sodium Chloride 0 03 Gm (½ gr)—Each ampule contains iron cacodylate 0 03 Gm (½ gr) in 1 Cc of physiological solution of sodium chloride

Prepared by the Intra Products Co Denver Colo No U S patent or trademark

The ferric cacodylate used in the preparation of ampules ven iron cacodylate complies with the following tests

A 5 per cent solution of ferric cacodylate affords no precipitate with silver nitrate test solution or with barium chloride test solution nor does it show an immediate blue or green color upon addition of potassium ferricyanide test solution nor does any turbidity occur when 1 Cc calcium chloride test solution is added to 5 Cc of this 5 per cent solution

No yellow precipitate is produced in a 5 per cent solution by ammonium molybdate test solution or by sodium thiosulphate test solution

If the iron be removed by precipitation with ammonium hydroxide filtered and make acid with hydrochloric acid it should afford no more than a slight color upon the addition of an equal volume of hydrogen sulphide test solution

If 0 1 Gm ferric cacodylate in 8 to 10 Cc water be placed in a stoppered test tube with 2 Cc hypophosphorus acid or 1 Gm stannous chloride acidified with hydrochloric acid it should develop the disgusting odor of cacodyl within an hour

Assay Dissolve 0 2 gm ferric cacodylate in 100 Cc water titrate with tenth normal sodium hydroxide using phenolphthalein as indicator Each Cc of tenth normal sodium hydroxide is equivalent to 0 01557 Gm absolute $Fe[(CH_3)_2AsO_2]_3$ this should assay from 82 5 to 87 1 per or 37 9 to 41 9 per cent Arsenic

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SATURDAY, JULY 3, 1920

THE ARREST OF HEMORRHAGE

The clotting of blood is a complicated process, the explanation of which is still being debated The importance of the problem involved can scarcely be denied, however, for it concerns not only the natural arrest of hemorrhage from wounded blood vessels, but also the management of the dangerous conditions that may arise in hemophilia One indispensable factor in coagulation is the formation of the insoluble protein fibrin from an antecedent fibrinogen existing in solution in the plasma There is a second generally admitted essential agency, known as fibrin ferment, or thrombin, which is not present, in active form at least, *in the circulating blood, but is formed when the blood* is shed Sometimes, under abnormal conditions, it arises within the blood vessels, so that an intravascular clot may appear When one begins to inquire how and when the fibrinogen, thrombin and other less generally admitted factors interact to produce coagulation of the blood, the uncertainties and conflicts of current hypotheses are at once brought to notice

It is well known that whereas contact of shed blood with an ordinary foreign surface is sufficient to induce coagulation, the plasma fails to clot rapidly when it is brought into contact with perfectly clean, smooth surfaces, and particularly such as are coated with a greasy layer of paraffin or oil In explanation of this circumstance, Tait [1] has concluded that the blood contributes in two different ways toward arrest of hemorrhage from a cut vessel First, certain of the cells agglutinate at the cut end so as to form a plug, second, the plasma undergoes coagulation

A special though poorly defined rôle has long been assigned to the platelets in the phenomena of coagulation Tait now asserts that the way in which nongreasy foreign matter induces coagulation is by affording a suitable physical surface to which the labile platelets or spindle cells, latterly called thigmocytes, can adhere Such adhesive cells are highly phagocytic toward particles of nongreasy matter When they make an undue effort to ingest foreign matter, the cells often stretch and disintegrate sufficiently to allow thrombin within them to exude, whereupon clotting occurs On this hypothesis it is possible to understand that clotting fails to manifest itself when blood is confined within smooth surfaces, because the cells remain intact and no thrombin exudes Likewise when anticoagulants, such as oxalates or citrates, are added to blood the thigmocytes remain unaltered

From the standpoint of Tait's hypothesis, the primary event in the natural arrest of hemorrhage from a wound is local adhesion of labile cells in the form of an agglutinum, which plugs the cut end of the vessel By adhesion to the extra-endothelial edge, these cells acquire adhesiveness to other unaltered cells of the same kind (sometimes to blood corpuscles of other *kinds as well), and so on in succession, in this way the* plug is built up If this explanation proves to be correct, it is interesting to note, as Tait points out, that the variety of cell which is assumed to furnish thrombin by cytolysis and thus cause clotting of the plasma is likewise responsible for the formation of the plug In other words, the same cell may contribute in more than one way to the arrest of hemorrhage The theory of thigmocyte function therefore demands further consideration, especially in relation to hemophilia and intravascular thrombosis

1 Tait J Natural Arrest of Hemorrhage from a Wound Proc Physiol Soc June 7 1919 J Physiol 53 xix (Sept 5) 1919

THE TREATMENT OF MYXEDEMA WITH THYROID EXTRACT

Although the condition now recognized as hyperthyroidism of adults was described as early as 1873 by Sir William Gull, the name myxedema was not coined until 1878, when Ord employed this designation for the phenomena of the subcutaneous tissues which he observed at necropsy The increased thickness of the skin, the "solid edema" of the malady, was attributed to an abnormal abundance of mucin, hence the name The relation of myxedema to the loss of function of the thyroid gland was not appreciated until the surgeons Reverdin of Geneva and Kocher of Berne described the similar condition that followed goiter enucleation The investigations subsequent to these observations led in turn to a more careful study of the effects of experimental thyroidectomies in animals, and of the influence of thyroid transplantation or administration of preparations of the glands

These researches paved the way directly for the present-day therapy of myxedema, which has been described as one of the most remarkable achievements of medicine, it is, in fact, the best example of successful organotherapy THE JOURNAL cannot overlook the opportunity to refer to the life history of the first myxedema patient treated by thyroid extract The death of this woman has just been recorded by Dr George R Murray,[1] who proposed the treatment for

1 Murray G R The Life History of the First Case of Myxoedema Treated by Thyroid Extract Brit. M J 1 359 (March 13) 1920

her and initiated the relief Following the suggestion of Sir Victor Horsley that myxedema, cretinism and cachexia strumipriva might be benefited by grafting a portion of healthy thyroid gland in persons suffering from these diseases, a favorable result seemed to have been secured in this way by Bettencourt and Serrano [2]

This in turn led Murray to attempt thyroid therapy The first patient, a married woman, aged 46 was shown at a meeting of the Northumberland and Durham Medical Society in England, Feb 12, 1891 She presented a typical case of myxedema of several years' standing Murray stated his intention of treating her with thyroid extract, and the therapy was begun, April 13, 1891 The description of his procedures deserves being recorded in his own words

> The experimental nature of the treatment was explained, and the patient realizing the otherwise hopeless outlook, promptly consented to its trial In order to insure that the extract was properly prepared, the thyroid gland was removed from a freshly killed sheep with sterilized instruments and conveyed at once in a sterilized bottle to the laboratory where the glycerin extract was prepared This extract was afterward included in the British Pharmacopeia of 1898 as "liquor thyroidei" A hypodermic injection of 25 minims was given twice a week at first, and later on at longer intervals The patient steadily improved

At the end of three months the injections were given at fortnightly intervals Later when Fox and Hector Mackenzie had demonstrated the efficacy of oral administration of thyroid extract, Murray's patient received 10 minims by the mouth six nights a week On this dose she remained in good health and free from the signs of myxedema She continued to take liquid thyroid extract regularly until 1918, when difficulties in the supply of this preparation led to the use of thyroid tablets The woman enjoyed excellent health until 1919, when she died of cardiac failure at the age of 74 Murray concludes the story of the historic case

> This patient was thus enabled, by the regular and continued use of thyroid extract to live in good health for over twenty-eight years after she had reached an advanced stage of myxedema During this period she consumed over 9 pints of liquid thyroid extract or its equivalent, prepared from the thyroid glands of more than 870 sheep

In the United States, the first patient with myxedema similarly treated by Kinnicut in 1892 was a woman who had been ill twelve years If anything were needed at present to make the prognosis in myxedema favorable, Murray's simple yet eloquent record would easily bear remarkable testimony Evidently the duration of life need not be shortened by simple atrophy of the thyroid if suitable treatment is instituted The science of medicine may well rejoice on this account The success of thyroid therapy in myxedema was not an accident or the outcome of empiric findings, it is a triumph of scientific research

2 Bettencourt and Serrano Semaine med Aug 13 1890

THE REPAIR OF PERIPHERAL NERVE INJURIES

Among the varied physiologic damages attributable to war wounds, the injuries to peripheral nerves offer a surgical problem of peculiar and often perplexing difficulty When there has been a severance of continuity in a nerve, the ideal restorative procedure consists in bringing together the parted ends and attempting to secure union and regeneration by an end-to-end suture Such a logical operation is by no means always possible, owing to the extent and character of the injury involved Hence, the possibility of the transplanting of nerve segments to bridge an otherwise unconquerable gap has been proposed The choice of sources for what has been termed an autotransplant in the patient himself or a homonerve transplant from another individual of the same species will naturally be restricted to such nerves as are less essential in the bodily functions In human surgery, segments taken from the cutaneous radial, the musculocutaneous and the crural nerves have been suggested as possibilities

It has been known for some time that transplanted nerve segments undergo structural change after transplantation It therefore occurred to Lewis and Huber, who have been engaged in extensive studies of the repair of peripheral nerve injuries for the Surgeon-General's Office, that the process of regeneration through a nerve transplant might be facilitated and hastened by using as a transplant a segment of a nerve already in wallerian degeneration The experience gained by Huber [1] in an experimental investigation of this question showed no preference for either type of transplant Regeneration was secured, for example, when a segment of degenerated nerve from the sciatic was used to bridge a defect in the resected ulnar nerve of the same animal There was no indication, however, that regeneration took place more satisfactorily and more rapidly than it would have taken place if an undegenerated autonerve transplant had been used

The experiments of Huber and his surgical collaborators show that degenerated autonerve and homonerve transplants may be used with assurance of success if an opportunity arises This is a helpful finding, for in practice it is not always easy to secure fresh transplants, and it is particularly difficult if they are to be secured from the patient himself Given the possibility of using degenerated segments of human nerves, how are the latter to be stored? French surgeons [2] have already reported the use of human nerves stored in petrolatum at approximately 2 C (35 6 F) for periods varying from two to five weeks Huber has found liquid petrolatum at ice chest temperature (3 C , 37 4 F) preferable Nerves have been stored in this way for forty days and still found useful

1 Huber C G Repair of Peripheral Nerve Injuries, Surg Gynec & Obst 30 464 (May) 1920
2 Dujarier and François Bull January 1918

Huber finds no reason why longer storage without loss of transplanting value may not be possible

Nerve fragments removed with proper aseptic precautions may also be stored in 50 per cent alcohol for the purposes of transplantation It cannot be supposed that any part of the tissue retains its viability under such conditions, hence, as Huber asserts, the value of the transplant is not dependent on the presence of living sheath cells There is no question of the nerve fibers of a nerve segment stored in 50 per cent alcohol undergoing wallerian degeneration as does the peripheral part of a nerve after section The neurilemma sheaths maintain and through these the central neuraxes reach the distal nerve segment

Sometimes the disparity of size between the transplant and the resected nerve offers a serious practical difficulty It is now proposed to meet this by suturing several of the fragments of smaller diameter between the larger resected ends when this situation is encountered This has been spoken of as a cable-nerve transplant Huber has summarized the results of all experimental work on nerve transplantation with the conclusion that the most favorable results are to be obtained after the use of an autonerve transplant, and for practical surgery a cable-autonerve transplant, several segments of a cutaneous sensory nerve being utilized to bridge a defect in a large motor-sensory nerve The question of the type of nerve, he adds, is not material, the question of the funicular arrangement is of secondary importance, whether the central or the distal end of a transplant is placed centrally is not necessary of consideration, accurate end-to-end suture, careful technic and a dry field are essential Whether the employment of sheaths about nerve suture lines or transplants is of positive value in preventing connective tissue proliferation still remains to be definitely ascertained

SOME ASPECTS OF DESERT CLIMATES

How the body adjusts itself to unusual changes in its environment has always been a problem of interest to those who have to deal with the living organism The problems of adaptation to altitude, for example, have become of more than mere academic interest since the development of aerial flight by man Likewise, the mechanism for adjustment to extremes of temperature has aroused attention in greater degree as man has begun to penetrate the Arctic regions and the tropics in consequence of the improved facilities for transportation to almost every region of the earth

Among the scientific observations made during a recent expedition to the Egyptian deserts[1] are indications that under the peculiarities of climate there encountered a slight though unmistakable increase in red blood corpuscles may occur This is analogous to the well known increase that is exhibited by man transported to considerable altitudes, where the reduced partial pressure of oxygen evidently becomes a stimulus for the mobilization of an added number of oxygen-carrying corpuscles in the circulating medium of the body As deficiency in oxygen cannot be held responsible for an increment in erythrocytes and hemoglobin in the blood at the low altitude of the Egyptian desert, some other explanation must be sought for the phenomenon recorded Special studies have demonstrated that it cannot be explained by any notable concentration of the blood in the tropical climate The most tenable hypothesis thus far advanced charges a stimulation of the blood-forming organs to peculiar and intensive light conditions that prevail in the desert Thus it has also been shown experimentally that exposure to the light of the mercury arc may produce increases in erythrocytes in animals[2] If this assumption proves to be correct, a new aspect of climatology will have been emphasized in the hematopoietic influence of sunlight

It might be assumed that the severe heat of the desert would lead to extreme production of sweat and correspondingly a considerable output of chlorid through the skin This would be in harmony with the belief that in tropical climates increased output of water is synonymous with increased secretion of sweat Wohlgemuth's[1] studies at Assuan showed, however, that this view is not tenable The increased water elimination under the climatic conditions of the desert occurs essentially through the medium of so-called insensible perspiration Accordingly, the chlorid content of the blood is unaltered even when the loss of water from the body is considerable under the trying conditions of life in the desert

1 Loewy A Verhandl d physiol Gesellsch zu Berlin Sitzung vom 12 Mai 1916 conf Berl klin Wchnschr 1916 Ztschr f Balneol Klimatol u Kurort Hyg 9 43 1916 Bickel A Berl klin Wchnschr 1916 No 26 Wohlgemuth J Ueber die Zusammensetzung des Blutes und über das Verhalten des Blutdruckes in Wüstenklima Biochem Zt chr 79 290 (Feb) 1917

2 Bickel A and Tasawa Charité Ann 37 1913

Current Comment

GRADUATE MEDICAL EDUCATION IN THE UNITED STATES

The development of graduate medical education in the United States is a matter of the utmost importance Of the twenty-one cities having the largest population according to the census now nearing completion, all but two have undergraduate medical schools, but in only ten is any graduate medical instruction being offered, and in only four[3] are the facilities well organized and centrally administered In the other six, either the one school which exists has very meager teaching facilities or there are several independent noncooperating institutions, in no one of which can the student secure satisfactory instruction In this connection the New York Association for Medical Education, previously referred to in THE JOUR-

3 Boston New York Philadelphia and Minneapolis

NAL,[4] is working in the right direction All the facilities for graduate teaching in that city are to be administered through a central office from which the student will be promptly directed to the place where he can obtain the particular line of instruction he is seeking The association, furthermore, is aiding materially in the organization and development of the clinical facilities of that city For example, its first bulletin, recently issued, sets forth a standard course for specialists in diseases of the ear, nose and throat It also names the various institutions in New York which are giving courses of instruction in this specialty, and, it is stated, these courses have been reconstructed in order to meet the association's standard In order that thoroughly qualified teachers may be retained for the graduate schools, a larger fee than heretofore is being charged for tuition This larger fee, however, is not objectionable when the physician finds he can obtain the character of work desired Since the reorganization, all courses are said to have had a full enrolment, which shows that physicians appreciate the improvement made In fact, the New York association is in a position to refer students to courses in other parts of the country if they are brought up to a reasonable standard of excellence The experience in New York points to the importance of developing graduate medical courses in other large cities of this country Instead of only four cities in which clinical facilities to any considerable extent have been organized and centrally administered, there should be twenty or more cities in which the abundance of clinical material might be organized and made available for teaching purposes Since the war, which shut off many of the opportunities for graduate instruction in Europe, America not only has a great opportunity, but also an actual duty to perform in supplying equal if not better facilities for such instruction This would not only result in a better use of the clinical material, it would also aid in the development of clinical teachers, it would improve clinical methods in hospitals and there would be a constantly increasing number of better trained physicians and ultimately a better care of patients generally Furthermore, development of graduate instruction would not only be of benefit to the physicians and the public of this country, but in time would attract students from South America and other countries, and the reputation of the United States in medical education would be greatly enhanced

OBSERVATION ON THE DIGITALIS PLANT

So long as galenic preparations of drugs continue to be used, and so long as thoroughly accurate methods of standardization, either chemical or biologic, for the active ingredients are not available, it will be important to learn as much as possible about the variations to which the crude products, out of which our extracts and tinctures are prepared, are subject under natural conditions The physiologically potent alkaloids and glucosids that occur in many medicinal plants have been variously regarded by pharmaceutical botanists By some they have been held to represent waste products of plant metabolism, stored in the vegetable tissues because no mode of elimination is provided Others have looked on the glucosids as organic reserve materials devoted, like fats and carbohydrates, to the growth and development of the plants in which they occur In the case of the digitalis plant, *Digitalis purpurea,* active glucosids are found not only in the mature leaves but also in the seeds A recent investigation by Straub [1] in the pharmacologic institute at Freiburg in Baden has shown that the seed glucosids which include digitalinum verum (digitalin) and digitalein do not decrease in amount as do the fats when germination proceeds, hence they cannot be regarded as reserve products The glucosids pass into the leaves of the seedling without loss in quantity, on the other hand, the content of digitalis glucosids increases up to a certain stage This demonstrates conclusively that they are in fact essentially waste residues of the metabolism of the growing plant organism

4 New York Association for Medical Education J A M A 73 551 (Aug 16) 1919

ILLEGAL PRACTICE BY MEDICAL CULT PRACTITIONERS

Chiropractors and followers of other medical cults are doubtless practicing in many states in direct violation of the medical practice acts Chiropractors, especially, are aided and abetted in doing so through an organization known as the Universal Chiropractors' Association of Davenport, Iowa, which has as its officers some who are also closely identified with a chiropractic school in that city [2] Such illegal practice could doubtless be checked, if not totally done away with, if in more states such energetic action were taken against them as is now being conducted in Illinois by the Department of Registration and Education As referred to in our news columns this week,[3] temporary injunctions are being issued individually against all chiropractors in Illinois in an attempt to break the vicious circle established by the Universal Chiropractors' Association, which is encouraging a wholesale violation of law If those who desire to practice the art of healing are not willing to comply with such reasonable educational standards as will render the public safe from ignorance and incompetence, then they should not be granted legal authority to practice, nor should they be permitted to practice on the public illegally through the machinery they themselves have established to evade the penalty for so doing

1 Straub W Ueber die Entwicklung der typischen Blattglykoside in der keimenden und wachsenden Digitalispflanze Biochem Ztschr **82** 48 (June) 1917

2 See article on The Fountain Head of Chiropractic What of Its Product? p 52 this issue

3 Illinois News p 40 this issue

The People a League of Health—There are public health laws galore but these form only the machinery which sets in motion the regulations under which the public health is controlled And, yet, machinery however much it can accomplish is still a soulless thing that is the defect of the machinery of the public health laws It is powerless to influence the personal voluntary assistance of those who benefit from it—*Medical Press and Circular* **109** 66 (Jan 28) 1920

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARKANSAS

Health Train Starts—The health train of the state board of health commenced its tour of the Cotton Belt Lines at Piggott, June 7. The train is under the direction of the sanitary engineer of the Cotton Belt system, and Dr. Charles W. Garrison, state health officer.

Health Association Meeting—At the annual meeting of the Arkansas Public Health Association held in Little Rock, the following officers were elected: Dr. Augustus C. Shipp, president; Dr. Henry Thibault Scott and Mrs. H. C. King, Fort Smith, vice presidents; Mrs. C. L. Shafer, secretary, and Mr. T. S. Shannon, treasurer.

GEORGIA

County Adopts Health Law—By unanimous vote of the grand jury, May 26, the Ellis law was adopted in Walker County, this being the eighteenth county in the state to adopt the law.

College Commencement—At the eighty-ninth annual commencement exercises of the Medical College of Georgia, Augusta, held May 31, a class of fifteen seniors was graduated.

New State Officers—At the seventy-first annual session of the Medical Association of Georgia held in Macon May 5 to 7, the following officers were elected: president, Dr. Edward T. Coleman, Graymont; vice presidents, Drs. Theodore E. Oertel, Augusta, and Fred L. Webb, Macon; secretary-treasurer, Dr. Allen H. Bunce, Atlanta; delegates to the American Medical Association, Drs. Edward G. Jones and William C. Lyle, Atlanta, and alternates, Drs. Jarvis G. Dean, Dawson, and Mallie A. Clark, Macon.

ILLINOIS

Library Open to Physicians—The medical department of the University of Illinois through its dean, Albert C. Eycleshymer, extends a cordial invitation to members of the profession to make free use of its library on the ground floor of the college building at Congress and Honore streets, Chicago. It contains many standard works and subscribes to about 300 periodicals.

Rush Alumni Election—At the annual meeting of the Rush Medical College Alumni Association held in Chicago, June 16, Dr. Frank Billings presided as toastmaster and the following officers were elected: president, Dr. Wilbur E. Post, Chicago; vice presidents, Drs. J. J. Moore, Chicago, A. S. Barnes, Columbus, Ohio, and David Fiske, Chicago; necrologist, J. F. Waugh, Chicago; treasurer, Carl O. Rinder, Chicago, and secretary, Dr. Charles A. Parker, Chicago. Drs. E. L. Kenyon and Dean Lewis, Chicago, were made directors for three years. Dr. Morris Fishbein continues as editor of the alumni bulletin.

Chiropractors Enjoined—The department of registration and education reports that twenty-six more temporary injunctions have been issued against individual chiropractors who are practicing in Illinois without licenses. The injunctions restrain these individuals from paying assessments to the Universal Chiropractors' Association of Davenport, Iowa, and forbids them from accepting money from that association with which to pay fines, penalties and costs assessed against them by the Illinois courts. It also restrains them from accepting the services of attorneys of the association in defending cases brought against them in the Illinois courts. The result of the injunction is that each chiropractor must finance his own defense. The chiropractors enjoined are: Claude Griffith, Cave-In-Rock; Ollie D. Davidson and Mrs. Elizabeth Suverkrup, Champaign; Ethel B. Stump, G. E. Stump and Lillian B. Stump, Chenoa; S. M. Bernell, Leonard W. Miller, J. Charles Orr, W. C. Schulze and Harrison Atchley, Chicago; Mabel E. Gilpin, Chicago Heights; Anna M. King, East St. Louis; George F. Stewart, Elgin; B. F. Tucker, Galesburg; Rose Aulabaugh, Granite City; Josephine Olson, Greenville; Elnora Clawson, Industry; Louis O. West, Mascoutah; V. C. Wright, Mattoon; Berta Schraner, Rushville; L. E. Gates, Sparta; T. E. Hallbeck, West Salem; W. F. Prisk, Wilmette; E. L. Spencer, Blue Island, and Bessie Atherton, Peoria. Similar injunctions were previously issued against twenty-five chiropractors as reported in THE JOURNAL, May 22, and are still pending against about fifty other chiropractors in the state.

INDIANA

Brockway Found Guilty—Dr. Charles J. Brockway, Lafayette, accused of involuntary manslaughter in connection with the death of his wife, is said to have been found guilty by a jury on June 12. Dr. Brockway's attorneys filed a motion for a new trial, and his bond of $5,000 was continued pending arguments on the motion.

Personal—Dr. Fred L. Bunch, city health officer of Muncie, is reported to have been operated on recently for appendicitis and for the removal of a malignant growth.——Dr. Henry W. Greist and his family left Monticello, July 1, on their way to Cape Prince of Wales, Alaska, where Dr. Greist will take charge of the Presbyterian Medical Mission. After a survey covering the Seward Peninsula and islands in Behring Strait it is proposed, if conditions justify, to build a hospital for this territory next summer.——Dr. Samuel Dodd, recently appointed superintendent of the Northern Indiana Hospital for the Insane, Logansport, has assumed charge of the institution.——Dr. E. C. Wickersham, Anderson, is reported to have been seriously injured in an automobile accident, May 30.——Dr. William I. Fugate, Newcastle, for six and one-half years secretary of the Newcastle board of health, has resigned and has been succeeded by Dr. William C. Heilman Hope.——Dr. Alois L. Ziliak, Owensville, has been elected president, and Dr. William F. Morris, Fort Branch, vice president, of the Gibson County Hygiene and Health Association.

KANSAS

Supreme Court Upholds Quarantine—The supreme court of Kansas recently denied a writ of habeas corpus to certain persons quarantined at a state institution because of venereal disease.

District Society Meeting—At the annual meeting of the Medical Society of the Seventh District, held in Hutchinson, June 10, the following officers were elected: Dr. John T. Scott, St. John, president; Drs. John A. Dillon, Larned, and A. Wallace Sterling, vice presidents, and Walter N. Mundell, Hutchinson, secretary-treasurer.

LOUISIANA

Authority Voted to Build Hospital—Authority to build a hospital in New Orleans to cost $1,500,000 was unanimously voted at the meeting of the mission board at the Southern Baptist convention.

Child Welfare Clinic Opened—The new child welfare clinic at Ninth and Constance streets, New Orleans, known as the Bertha Goetz Station, was formally opened May 14. Clinics will be conducted by Dr. Francis J. Kinberger on Tuesday, Wednesday and Thursday and Dr. Harry V. Sims in obstetrics on Thursday.

Colored Physicians and Dentists Meet—At the annual meeting of the Louisiana State Medical, Dental and Pharmaceutical Association held in New Orleans, May 4 to 6, Dr. Eugene C. Thornhill, New Orleans, was elected president, Dr. Thomas L. Welch, New Iberia, vice president and Dr. Lee A. Butler, Breaux Bridge, secretary-treasurer.

Personal—Dr. J. M. Thuringer, assistant professor of anatomy in Tulane University, has resigned.——Dr. John D. Frazar, De Ridder, has qualified as sheriff of Beauregard Parish.——Dr. Jacob W. Newman, New Orleans, has been elected president of the Louisiana Commission for the Blind.——Dr. William Scheppegrell has been elected president of the Louisiana Federation of Catholic Societies.

MARYLAND

Personal—The following physicians have been appointed as police surgeons in Baltimore city: Dr. Dwight H. Mohr, chief surgeon, and Drs. Walter L. Denny, Henry F. Cassidy, Pinkney L. Davis, William S. Gilroy, Henry C. Houck and E. H. Hutchins, all of Baltimore.——Dr. English Bagby has been appointed as instructor in psychology at the summer school of the Johns Hopkins University. Dr. Bagby has also been appointed instructor in psychology at Yale University and will go to New Haven, Conn., in the fall.

Instructors of Blind Meet—The twenty-fifth biennial convention of the American Association of Instructors of the Blind was held in Baltimore during the past week The sessions were held at the Maryland School for the Blind at Overlea Mr Eric Harilstad, teacher of the blind in Christiania Norway, who is sightless was one of the speakers at the convention Mr Harilstad spoke on the 'Work for the Blind in Norway" Dr Max Herz of Vienna Austria, also attended the convention and demonstrated his new invention, the typophone, by which the blind may read by means of a code similar to the Morse system

MASSACHUSETTS

Subsidy for a Physician—A report states that the town of Otis has established a special fund of $500 to be given to a physician who locates in that town

Changes in Personnel of Health Department—Dr Milton J Rosenau Boston, has resigned as director of the division of biologic laboratories, effective June 1, but will continue his connection with the department as consulting pathologist and bacteriologist——G Benjamin White has been made director of the division of biologic laboratories——Dr Stanley H Osborn, Boston, has resigned as state epidemiologist, effective May 1, to accept a position as director of the division of preventable diseases and deputy commissioner of the Connecticut Department of Health——Dr James E Henry has been temporarily appointed as epidemiologist, commencing June 1

MICHIGAN

Health Officers Elected—At the annual meeting of the Michigan Public Health Association held in Kalamazoo May 21 Dr Clyde C Slemons Grand Rapids was elected president, and Dr Henry F Vaughan, Detroit, secretary-treasurer

Must Serve Term.—The supreme court on June 7, affirmed the conviction of Dr George A Fritch Detroit, who during nearly fifteen years' conflict with the law, involving nearly a score of charges of malpractice, was twice convicted twice imprisoned and once freed of charges of manslaughter in connection with an illegal operation, will now have to serve his indeterminate sentence of from one to fifteen years in the Marquette prison

New State Officers—At the fifty-fifth annual meeting of the Michigan State Medical Society held in Kalamazoo May 25 to 27 under the presidency of Dr Charles H Baker Bay City, the following officers were elected president Dr Angus McLean, Detroit, vice presidents Drs Augustus W Crane, Kalamazoo, Udo J Wile Ann Arbor and Clarence M Williams Alpena Dr Frederick C Warnshuis Grand Rapids secretary-treasurer, holds office until his successor is elected at the meeting of the executive committee in January The principal outside addresses were delivered by Dr Hubert Work, Pueblo, Colo president-elect of the American Medical Association on 'The Modernization of the Osler Theory" and by Dr Frederick R Green, Chicago on "The Profession and Compulsory Health Insurance A memorial tablet was recently unveiled for the four members of the society who gave their lives in France during the war The tablet was presented by Dr Herman Ostrander of the State Hospital, Kalamazoo, on behalf of the Kalamazoo Academy of Medicine, and it is to be placed in the medical building of the state university A public health section of the society was created by vote of the house of delegates

MINNESOTA

Personal.—Dr Stanley J R Maxeiner has succeeded Dr Ernest M Hammes, St Paul as assistant editor of the *Minnesota Medicine*——Dr Wade R Humphrey Stillwater, has been appointed poor commissioner and county physician, succeeding Dr Ernest E Wells deceased

Help Offered Physicians in Venereal Disease Cases—The Minnesota State Board of Health division of venereal diseases, coordinated with the U S Public Health Service has sent a circular to all physicians in the state offering the services of an expertly trained man in diagnosis and treatment of venereal disease whose services are to be lent to individual physicians or communities Any physician desiring such assistance should address L W Feezer scientific assistant, U S Public Health Service University Campus Minneapolis

Tuberculosis Research Fellowship University of Minnesota—To encourage study of the means for the prevention and cure of tuberculosis, the Hennepin County Tuberculosis Association of Minneapolis announces that it has set aside a fund for the support of a tuberculosis research fellowship in the Graduate School of the University of Minnesota The candidate for the fellowship must be a graduate of a Class 'A" medical college, and will be expected to devote himself to research in some problem concerned with the causes prevention or cure of tuberculosis No teaching or other service will be required The fellowship yields $750 the first year, and progressively increasing amounts will be appropriated for the second and third years as conditions warrant Inquiries and requests for application blanks should be addressed to the dean of the Graduate College, University of Minnesota, Minneapolis

NEW YORK

Given War Decoration—Dr Richard Derby Oyster Bay, who served as lieutenant-colonel, M C, U S Army with the Second Division in France, has been awarded the Distinguished Service Medal

Commission to Improve Laws Regarding Children—The governor has approved the Smith-Walton bill creating a commission of sixteen members to collate and study all laws relating to child welfare investigate and study the operation and effect of such laws on children ascertain any overlapping and duplication of laws and of the activities of any public office department or commission thereunder and make recommmendations to the legislature or remedial legislation which it may deem proper as the result of its investigation

New Officers—At the first annual meeting of the Glen Cove Medical Society held June 10 Dr Joseph B Conolly, Glen Cove was elected president, Dr Richard Derby Oyster Bay vice president Dr Ernest P Schilling Glen Cove secretary and Dr Herman G Wahlig Sea Cliff treasurer——Bay Ridge Medical Society at its annual meeting held June 8 elected Dr Joseph W Malone president Dr Charles M Fisher vice president, Dr James W Fox, secretary, and Dr Bruce G Blackmar treasurer, all of Brooklyn

State Health Department Educational Campaign—In the past the state health department has been hampered in its work in rural sections of the state owing to the difficulties incident to transportation and handling the details of educational campaigns In order to remedy these difficulties and to meet the needs of the open country the department has had designed a large automobile truck, by means of which it is hoped to give rural communities the benefit of much work which hitherto has been confined to more central places The car carries its own picture screen which may be erected on the roof of the car or at any selected point outdoors It is planned to keep the car constantly on the road during the summer months

Course to Train Hospital Assistants—Owing to difficulty in obtaining trained hospital attendants Bird S Coler commissioner of public welfare has established four training schools for attendants These schools are at the City Neurological Hospital Blackwell's Island, the New York Children's Hospital Randall's Island Sea View Hospital Staten Island and Greenpoint Hospital Brooklyn The students are being instructed in the principles of hospital treatment and in the care of simple and ordinary sick and chronic cases When the students have completed this course they will not only be useful in hospital nursing but they will also be good practical workers in homes in which the salary of a trained nurse makes such service prohibitive

New York City

Jacobi Estate Appraised—Dr Abraham Jacobi left a gross estate of $515 933 and a net estate of $490 640 according to the appraiser's report filed by the state comptroller His daughter Mrs Margaret McAneny received $459 184 and the New York Academy of Medicine the rest

Hospital Seeks Funds—The Israel Hospital and the Zion Hospital of Brooklyn have amalgamated to form the United Israel Zion Hospital and have started a drive for $1 000 000 with which to build and equip a new hospital building It is planned to provide accommodations for 200 patients

Well Known Psychologist Dies—James Hervey Hyslop, well known psychologist and editor of the *Journal of the American Society for Psychical Research* aged 65 died June 17 from cerebral thrombosis and his brain was given to Dr Edward A Spitzka, New York City When received by Dr Spitzka after five days' immersion in 5 per cent formaldehyd solution the brain weighed 1 290 grams or 45.5 ounces avoirdupois

New Regulations Governing Isolation of Influenza and Pneumonia—The New York City Department of Health, April 29 adopted regulations governing the isolation of persons suffering from influenza and pneumonia, which provide that no person affected with these diseases shall be permitted to remain at home unless the following conditions are complied with

(*a*) The minimum quarantine period for cases of influenza shall be seven days after the onset of the disease, after which such quarantine period shall continue until discharges from the nose, mouth throat and ears have ceased

(*b*) The minimum quarantine period for pneumonia shall be twelve days and thereafter until the temperature of the patient has become normal

(*c*) There shall be a duly licensed practicing physician in attendance

(*d*) The room or rooms where the patient is to be isolated shall be well lighted and ventilated and such room or rooms shall be separate and apart from the rooms occupied by other members of the family

(*e*) All handkerchiefs or other substances contaminated by the discharges from the nose mouth and throat of persons suffering from these diseases must be properly cared for so that they shall not in any way constitute a menace to the health and life of others and they shall be properly and promptly disinfected

(*f*) The attending physician nurse or attendant shall be required to insure the use of handkerchiefs or other suitable material to receive the spray or droplets resulting from coughing sneezing or expectorations of the patient

(*g*) All unnecessary curtains rug or draperies should be removed from the room to be occupied by the patient All linens used by or which come in contact with the patient should be kept separate and apart from those used by other members of the family until the same have been boiled

(*h*) Dry sweeping in the room or rooms occupied by the patient is forbidden A vacuum cleaner or moist rags should be used

(*a*) All eating and drinking utensils used by the patient shall be separate and apart from those used by other members of the family and shall be boiled after each such use

PENNSYLVANIA

Physicians' Licenses Revoked—An official report from the Bureau of Medical Education and Licensure of Pennsylvania states that at its meeting in Harrisburg June 2 the license of Dr H S Kulp of Ardmore was revoked on the court record of his having committed criminal abortion——The bureau also suspended the license of Dr A C Speer of Pittsburgh on the ground of his being a drug addict——The certificate of Julia Sedula a midwife of McKees Rocks, was revoked on the ground that her certificate had not been registered in the office of the prothonotary and that she practiced midwifery while suffering from a contagious disease

Philadelphia

Personal—Dr Hugh M Miller has been appointed chief of the genito-urinary clinic, Phipps Institute by Dr Edward Martin, state commissioner of health——Dr Aller G Ellis, associate professor of pathology at Jefferson Medical College, who went to Bangkok, Siam, in May of last year on a year's leave of absence has now resigned from Jefferson Medical College and expects to stay at least three more years in Bangkok He has been appointed pathologist to the Chulalongkorn Memorial Hospital, Bangkok, Siam

TEXAS

State Officers Elected—The following is a list of officers elected at the Houston meeting of the State Medical Association of Texas president, Dr Ira C Chase Fort Worth, president-elect Dr Thomas J Bennett Austin, vice presidents Drs William S Miller Estelline, Willis J Pollard, Kauffman and Walter Shropshire, Yoakum Dr Holman Taylor, Fort Worth, is the secretary

VIRGINIA

Personal—Dr Dean B Cole, Richmond, executive secretary of the state tuberculosis association has resigned, taking effect July 1 Dr Cole will go to Bellevue Hospital New York City, to take up special work on the staff of that institution

City Must Finance Clinic—Notice has been served on the city of Norfolk that the venereal disease clinic in that city will not be financed by the U S Public Health Service after June 30 In order to continue, it will be necessary for the city to finance the work Since the clinic was opened in August last, more than 1 000 patients have been treated—— The Richmond Health Bureau has received notice from the director of the state bureau of venereal diseases that a good part of the assistance which had been given in the city venereal disease clinic will be withdrawn after July 1, and that the office of the physician who had charge of the clinic will be discontinued

WEST VIRGINIA

New State Officers—The fifty-third annual meeting of the West Virginia State Medical Association was held in Parkersburg, May 18 to 20, under the presidency of Dr Henry R Johnson, Fairmont, and the following officers were elected president Dr J Howard Anderson, Marytown, vice presidents, Drs Hubert E Gaynor, Parkersburg, Solomon G Moore, Elkins, and Charles O Grady, Charleston, and editor of the journal, Dr James R Bloss, Huntington Pence Springs was decided on for the place of the next meeting, and the time fixed was the fourth week in May, 1921

WISCONSIN

Fined for False Entry—Dr William E Fox, Milwaukee, charged with filing a false birth certificate is said to have been fined $100 and costs, May 5

Cabot in Milwaukee—Dr Hugh Cabot professor of surgery in the University of Michigan Ann Arbor addressed the Dane County Medical Society, University Medical Society and the Rock Jefferson and Sauk County medical societies, May 18

Personal—Dr Frank M McGauley, Fond du Lac, has resumed practice after an illness of five months Dr Arthur C Dahn Fond du Lac has been appointed physician of Lincoln, Neb——Dr Errol V Brumbaugh has been appointed deputy health commissioner of Milwaukee, succeeding Dr John P Koehler, resigned

Hospital Notes—The St Regina property, Madison, has been purchased by the Methodist Hospital Association, which has been seeking a site for a hospital in that city——Wells County Council has granted an appropriation of $30 000 for the erection of a third story to the Wells County Hospital ——The Franciscan Sisters of St Louis, who now conduct a fifty bed hospital here, have raised money for the building of a new 200 bed hospital They have a record of having raised $500 000 in two days——'Pureair," the new tuberculosis sanatorium for the counties of Ashland Bayfield and Iron, has just been completed near Salmo, Bayfield County It has been turned over for operation to the board of trustees by the committee from the three county boards which had charge of its construction Dr M S Hosmer has been elected superintendent of the institution——A bill for the establishment of a state hospital in Madison for the treatment of the crippled and deformed has become a law It is proposed that this hospital when constructed shall be manned by the staff of the medical school of the University of Wisconsin *The bill provides for a 300 bed hospital*

WYOMING

State Society Meeting—At the annual meeting of the Wyoming State Medical Society the following officers were elected president, Dr George P Johnston, Cheyenne, vice presidents Drs Charles E Lane, Lander, Elmer A Kell Rawlins and Fred Horton, Newcastle, secretary, Dr E Earl Whedon, Sheridan (reelected), and treasurer, Dr Chester E Harrison, Basin

CANADA

Neuropsychiatrists Organize—The Ontario Neuro-Psychiatric Association has just been organized and the following officers have been elected president, Dr Edward Ryan Kingston, vice president, Dr Harvey Clare, Toronto, and secretary-treasurer, Dr Clarence M Crawford, London

University News—A total of 745 students were registered in the medical faculty of McGill University Montreal, during the past session, a record that far exceeds any previous year Of this number, 145 had been soldiers——The Middlesex County Council has donated $100 000 toward the main building of the Western University, London, which is erecting a new million-dollar structure

Hospital News—Mrs F F Dalley, Hamilton, Ont, has given $10 000 to the City Hospital for research work——One hundred less beds at the General Hospital and sixty less at the Royal Victoria Hospital Montreal, are the result of the 1 per cent tax levied by the Canadian government on the purchase of all supplies by the hospitals It will cost the General Hospital $25 000 a year to pay the tax, and the Royal Victoria $35,000

Canadian Public Health Association—The officers elected at the annual meeting of the Canadian Public Health Association held in Vancouver last week are president Dr John A Amyot, Ottawa, vice presidents, Dr William F Roberts, St John N B, Gordon Bell, Winnipeg, and Miss Helen R Y Reid Montreal, secretary, Dr Robert D Defries, Toronto, treasurer, Dr Fred Adams Winnipeg Life membership was accorded Dr Frederick Montizambert, C M G Ottawa for fifty-four years chief medical officer of Canadian government quarantine——The national committee for combating venereal diseases reelected Mr Justice William Renwick Riddell, Toronto, chairman

Personal—Dr Richard J Harding Montreal, has been appointed professor of chemical pathology in the University of Toronto——Dr Frederick Montizambert C M G, superintendent of public health for Canada, is retiring on a pension He will be succeeded by Dr J D Page immigration officer of Quebec Dr Emile Nadeau will succeed Dr Page ——The government of Quebec has designated the following medical officers for duty in connection with venereal diseases in that province Dr Art A Simard Quebec City, Drs Siraphin Boucher and James A Hutchison Montreal Dr Antoine H Desloges, Montreal, has been named director of antivenereal service and Dr Ranger, assistant director Dr A St. Pierre, Montreal will be director of provincial hospitals——Dr Douglas V Currey has been appointed medical officer of health St Catherines Ont——Dr Victor V Harding (Owens College Manchester, England) has been appointed professor of pathologic chemistry to succeed Prof Andrew Hunter in the University of Toronto Dr Harding was associate professor in the chemical department of McGill University Montreal——Dr J A St. Denis, Montreal, has returned after three months spent in Europe

Activities of the Massachusetts-Halifax Health Commission—Dr D A Craig for five years medical superintendent of the Queen Alexandria Hospital, London Ont and during the war consultant in diseases of the chest for Military District No 1 of the Canadian Army, has been appointed tuberculosis examiner by the Massachusetts-Halifax Health Commission, and on June 15 took up his residence in Halifax Dr Craig will give his entire time to tuberculosis work and to other educational phases of public health contemplated by the Massachusetts-Halifax Health Commission He will supervise the three tuberculosis clinics being organized in the health centers and serve as a free tuberculosis consultant to physicians in Halifax and Dartmouth——The executive officer has also announced the appointment of Dr Gordon Wiswell as the physician to be immediately in charge of the prenatal, baby preschool age and malnutrition services in Health Center No 1 now conducted in Old Admiralty House, and of Dr Hugh W Schwartz as a physician immediately in charge of the nose and throat services Dr M J Carney, who organized the first tuberculosis clinic in Halifax, will continue in charge of at least one of the health center tuberculosis clinics——The commission recently announced the names of the following consulting staff, who will cooperate with Dr Royer the executive officer, in determining the policies in health center work Col John Stewart, dean of Dalhousie Medical School, Dr Frank Woodbury, dean of Dalhousie Dental School, Drs Arthur Birt, George M Campbell, Samuel J McLennan and R Evatt Mathers

GENERAL

New Officers for Dermatologists—At the annual meeting of the American Dermatological Association Dr Jay F Schamberg Philadelphia was elected president Dr Oliver S Ormsby, Chicago, vice president and Dr Udo J Wile, Ann Arbor, Mich, secretary-treasurer

National Exposition of Chemical Industries—The Sixth National Exposition of Chemical Industries will be held in Grand Central Palace in New York City from September 20 to 25, inclusive The exposition this year will be the largest ever held, a very elaborate program being prepared

Southern Railway Surgeons' Meeting—At the annual meeting of the Southern Railway Surgeons' Association, held in Washington, June 2 Mobile was selected as the next place of meeting, and the following officers were elected president, Dr William A Applegate, Washington, D C and vice presidents, Drs Horace H Kinney, Okolona Miss W S Knox, Knoxville, Tenn and R L Vaught Showns Tenn

General Gorgas' Illness—According to cabled reports the condition of Major-General Gorgas is still considered critical Some time ago General Gorgas had an attack of cerebral hemorrhage which affected his left side, and although there have been no new complications he had a slight setback last week He will remain in London where his projected sanitary expedition to West Africa was interrupted until his physical condition permits a return to the United States

Public Health Service Prepares for Fourth of July—The United States Public Health Service has sent broadcast its annual notices to newspapers of the United States regarding the danger in the use of fire works, Roman candles and other Fourth of July paraphernalia Special emphasis is placed on the possibility of lockjaw following wounds from fire crackers toy pistols and exploding rockets The usual first-aid remedies are mentioned including the necessity for the immediate removal from wounds of all dirt and other foreign particles Injection of tetanus antitoxin is suggested

American Legion Post Opposes Bonus Legislation—At a meeting of Caduceus Post 818 American Legion June 10 it was unanimously resolved that the first obligation of the government is to furnish proper care to the disabled service men and to dependents of those who made the supreme sacrifice, that until these obligations are fulfilled it is unwise to enact beneficial legislation for able-bodied exservice men and it is unpatriotic of such persons to seek or accept monetary benefit and that members of the Caduceus Post are unalterably opposed to the payment of a cash bonus or so-called adjusted compensation Caduceus Post is composed largely of physicians from the city of New York who served in the World War

Bequests and Donations—The following bequests and donations have recently been announced

Pennsylvania Hospital Philadelphia a bequest of $229 000 to establish a memorial to her deceased husband Annesley R Dwett by the will of Elizabeth J Dwett

Frankford Philadelphia Hospital $250 000 by the will of Mrs Isaac Schlicter

Iowa State University College of Homeopathy a gift of $400 000 by Charles F Ketering Dayton Ohio for medical research in connection with the college

Albany N Y Medical College grants of $5 000 a year for two years from the General Electric Company and $10 000 from the general education board and a scolarship of $200 a year to be known as the Dr Julia G McNutt Scholarship to be awrded to a woman medical student of the college preferably of New England ancestry

Red Cross Campaign—The fourth Red Cross Roll Call will be held from Armistice Day November 11, to Thanksgiving Day November 25 and hereafter every anniversary of the end of hostilities of the World War will be made an occasion for America to renew its Red Cross allegiance through memberships The funds thus received will be utilized for the furtherance of the peace-time activities of the American Red Cross which are to continue to work for American veterans of the World War particularly the disabled to serve our peace-time Army and Navy to develop stouter national resistance to disease through health centers, to increase the country's nursing resources, to cooperate with official health agencies, to continue preparedness for disaster relief, to unite home service and community work and to complete relief work among the war exhausted and disease ridden people of Europe

LATIN AMERICA

Centennial of the Buenos Aires Academy of Medicine—Great preparations are being planned to celebrate the completion of the century April 17, 1922, by the Academia de Medicina of Buenos Aires

Bubonic Plague—On June 22 the port surgeon at Tampico Mexico after careful investigation of suspected cases of bubonic plague reported that the plague had not made its appearance at that port——A case suspected of being bubonic plague has been discovered in Mexico City——Two new cases of bubonic plague were reported in Vera Cruz June 19——Since the outbreak of bubonic plague in Vera Cruz on April 14, thirty-two cases have been reported with twenty-two deaths

New Health Publication in Venezuela—The Direccion de Sanidad Nacional of Venezuela has begun the publication of a quarterly devoted to public health legislation vital statistics and reports of the various divisions of the department In addition it publishes original articles usually in Spanish and English on research work carried out in Venezuela The quarterly is well printed and each number contains an average of about 100 pages Dr L G Chacin Itriago is at present the director of public health of Venezuela

FOREIGN

Castellani Honored—The president of the French Republic has conferred the honor of Officer of the Legion of Honor on Dr Aldo Castellani of the London School of Tropical Medicine for his method of combined typhoid-paratyphoid and typhoid-cholera vaccination

Italian Pediatricians to Meet—The ninth Congresso di Pediatria is to meet at Trieste the last week in September to discuss vaccine treatment in children's diseases and infant welfare The first topic will be presented by Drs Di Cristina of Palermo and Caronia of Naples The secretary of the congress is Prof E Modigliani via Palermo 28 Rome

Antityphus Hospitals in Poland—From the funds provided for relief in Poland by the British Red Cross and British government, a sum of 4,000 000 marks or about $28 000 has been placed at the disposal of the Polish Red Cross by Mr W C Boyden, the commissioner general of the League for Poland This sum is to be devoted to organizing and equipping two hospitals for the antityphus campaign

Maternity Hospital at Chalons—Ground has been broken for the erection of a model maternity hospital at Chalons, France, to cost a million francs The undertaking is financed by the Friends' Unit of the American Red Cross partly from the proceeds of sales of supplies to inhabitants of this region and partly from direct gifts Sixty beds in this hospital will be set aside for the free use of the people of Chalons and neighboring villages

Australian Red Cross Policy—The Australian Red Cross has issued a declaration of policy to its various branches for their future guidance which provides for the extension of the voluntary aid detachment movement throughout Australia, the maintenance and extension of all Red Cross schemes for the benefit of disabled soldiers, sailors and military nurses, assistance in providing nurses for soldiers' settlements, and the general promotion of such objects as may tend to promote national health and mitigate suffering

Congress of French-Speaking Alienists and Neurologists—The circular has been received announcing the XXIV *Congres des medecins alienistes et neurologistes de France* et des pays de langue française to be held at Strasbourg Aug 2-6 1920 The subjects appointed for discussion are hallucinations from dreams professional mental disease, and the lesions of the thyroid with exophthalmic goiter Prof E Dupre of Paris will preside and the secretary is Dr R Lalanne, medical director of the asylum at Mareville pres Nancy

Medical Conference at Geneva—At the first formal meeting of the medical advisory board of the League of Red Cross Societies which convenes at Geneva Switzerland July 5, the following countries will be represented United States, by Dr Simon Flexner, Belgium, by Professor Brodet, Denmark by Professor Madsen, France by Professors Roux and Albert Calmette and Dr Leon Bernard, Great Britain, by General Lyle Cummins Walter Fletcher and George Newman, Italy, by Professor Bastianelli and Dr Castellani, Japan by Dr Kinnosuke Miura, and South America, by Dr Chagas

Proposed Tribute to Italian Hygienist—Prof Luigi Pagliani of the chair of hygiene in the University of Turin reaches the age limit this year, and it is also the fiftieth anniversary of his professional career He was the pioneer in organizing the public health service in Italy, in directing legislation and in controlling and preventing epidemics A committee consisting of the incumbents of all the chairs of hygiene in the country has been formed to collect funds to found an annual prize, the Pagliani prize The treasurer of the fund is Prof Paolo Desderi, via Bidone 37, Turin

Monument to Belgian Biologist—Our Belgian exchanges describe the recent festivities in connection with unveiling the monument in honor of the late Professor van Beneden, at the entrance of the institute at Liege, the scene of his labors Van Beneden had to his credit a long list of works on zoology, histology and general biology and he was one of the two founders of the *Archives de biologie* in 1880 In the course of the speeches it was recalled that van Beneden never ventured to make positive statements in scientific matters but always qualified his announcements by the words It is eminently probable that "

Bulletin of the Belgian Department of Labor and Food Supply—The first number of a journal has been received to be issued quarterly by the minister of industry, labor and food supply of Belgium The inspector-general of the medical service of the department, Dr D Glibert, contributes an article on the influence of industrial noises, Dr G Galand on traumatism of the ear from explosions during labor, and others write on the painting of ships, syphilis in glass blowers the sanitary supervision of young industrial workers, and on first aid The bulletin is published at the Imprimerie medicale 34 rue Botanique, Brussels, the price of each number is 1 franc

Child Welfare Work—Coordination of all phases of child welfare work is being successfully carried out by the new Children's Bureau of Lower Austria The work for schoolchildren includes physical examinations and school medical inspection, physical training and vocational guidance During 1919, the bureau established thirteen homes, accommodating more than 3 000 children who were delicate or were recovering from an illness In addition to its work of promoting all measures pertaining to the welfare of children, the Children's Bureau of Lower Austria is charged with the enforcement of the law on the supervision of placed-out children, and the child labor law, both passed in 1919

New Journals on Heart and Blood—Italy has founded the *Haematologica, Archivio italiano di ematologia e sierologia,* to be a bulky volume of 500 pages with handsome colored plates The parts are issued irregularly The founders are Prof A Ferrata whose address is Cesare Battisti 53, Naples, and Prof C Moreschi of Parma The subscription to the volume is 55 francs A similar special journal has also been founded in Spain by a group of university professors, with Profs G Pittaluga and L Calandre of Madrid in charge, and F Jimenez Asua and J Planelles as secretarios de la redaccion It is issued bimonthly at an annual subscription of 24 pesetas The address of this *Archivos de cardiologia y hematologia* is Doña Blanca de Navarra 4 Madrid Two numbers have already been issued of each of these new journals

Celebration of Cortezo's Fiftieth Professional Anniversary—The director of the *Siglo Medico* of Madrid, Dr Carlos Maria Cortezo is a life senator of Spain and has served in the cabinet at different times The fiftieth anniversary of his entering on his professional career was celebrated May 30 with much ceremony, in the hall of the Academia de Medicina The minister of state conferred on him in the name of the king the collar of Carlos III, and the municipality notified him that the street on which he had been born had been renamed for him The first stone was also placed for the foundation of a monument to him in the Parque de Madrid for which his friends are collecting subscriptions An extra souvenir number of the *Siglo Médico* was issued on the occasion with more than sixty articles contributed This number is sold separately for 2 pesetas, the profits to be applied on the monument

Gift to London Hospital—The Rockefeller Foundation reports that approximately $6 000,000 has been appropriated for the University College Hospital Medical School of London This particular institution was selected because of the physical unity of the hospital and medical school buildings and the close relationship existing between the University College and its medical school The medical school has also recently organized what are referred to as full-time clinical units which combine research with the care of patients and with the teaching of students The foundation expresses its interest in the control and prevention of disease throughout the world and is aiding this medical school in London since it is cooperating with governments in many parts of the British Empire The building program, for which about $3,000,000 has been appropriated, calls for the enlargement of the hospital to a capacity of 500 beds and for the erection of a building for an institute of anatomy There will also be a new home for nurses, new quarters for resident physicians and a biochemical laboratory The rest of the appropriation will be used to meet the annual expenditures of the medical school

Deaths in the Profession in Other Countries

Dr T A Tage-Hansen, the leading surgeon of central Denmark where he maintained the Aarhus hospital in the front rank of such institutions aged 71——Dr J García of Tucuman, Argentina, subdirector of the Departamento Nacional de Higiene in which he had served for twenty-two years member of the state legislature died at Buenos Aires May 18——Dr Carlos Spada, Jr, of Buenos Aires author of a number of works reporting the results of biologic research, editor of the *Revista Sud-Americana de endocrinologia* of Buenos Aires of which he was one of the founders, aged 28——Dr T Alves of Campinas, Brazil, aged 63

Government Services

Hospital Discontinued

The Surgeon-General of the Army has arranged to discontinue U S General Hospital No 3 at Carlisle, Pa as a general hospital on June 30 He has been authorized to utilize the Carlisle barracks military reservation and the acreage adjoining the school as a Field Service School, Medical Department, U S Army"

Medical Officers Honored

Rear Admiral Robert M Kennedy M C, U S Navy was the commencement orator at the graduating exercises of the Detroit Medical College June 18, and chose as his subject 'The Necessity for Post-Graduate Study"——Col Joseph M Heller M C, U S Army, was elected surgeon general of the Military Order of Foreign Wars of the United States at its nineteenth triennial convention held in New York, May 20

Distinguished Service Cross Awarded

The distinguished service cross has been awarded to Major Paul F Brown, Minneapolis Medical Detachment 361st Infantry, "For extraordinary heroism in action near Eclisfontaine, France on the nights of Sept 26 and 27, 1918 Major Brown, then captain voluntarily advanced in front of our lines for the purpose of rescuing the wounded left in advance of the new lines by the retirement of a unit of the regiment Due to his efforts fourteen wounded Americans were brought safely back to our lines"

Health Conditions of the Army

Admission and noneffective rates for the week ending June 18 show a slight increase over the preceding week but are still unusually low There were twelve new cases of malaria reported from the Southern Department during the week, eight new cases reported from Camp Dodge, four from Camp Pike and four from the Western Department Two admissions for pneumonia were reported from Camp Taylor two from the Eastern Department and one each from Camp Gordon, Camp Upton, Fort McDowell and the Southern Department Two cases of diphtheria were reported from Camp Taylor The death rate for disease is 2 2 per thousand as compared with 3 1 last week There were seven deaths from disease, one of which was due to tuberculosis and two to pneumonia Health conditions among the American forces in Germany continue excellent The following cases of communicable diseases were reported influenza, five, pneumonia, four, scarlet fever two mumps, two, impetigo, three, chickenpox, one, and scabies fifteen

Public Health Service Investigates Plague

Surgeon-General Hugh Cumming of the Public Health Service is in Pensacola, Fla, investigating the bubonic plague cases which have recently been found in that city The prevalence of the plague at Vera Cruz, Tampico and New Orleans, while not a subject for alarm is receiving practical attention at the hands of the Public Health Service At New Orleans sixteen cases have appeared since 1909—the last one June 15 At Pensacola one suspicious and three positive cases have appeared at Galveston there are two positive cases The Public Health Service has started a campaign in the southern seacoast cities against the rat menace with a view of eliminating any further spread of the plague by rodents Senior Surgeon G M Guyteras at Key West Fla has begun a rat survey in that vicinity, and at Pensacola the Public Health Service has a force of trappers and over 1,000 traps at work.

At the same time the Public Health Service is reviewing its activities to eliminate rodents and has sent letters to Public Health officers of all states urging that local officials boards of trade and municipal organizations engage in continuous efforts to exterminate rats for sanitary reasons

Applicants for Positions in Medical Corps

Considerable disappointment exists in the War Department because of the fact that only 1 300 applications have been received for the examination for the appointment of officers in the Medical Department of the Army This examination is being conducted by the War Department under the Army Reorganization Act of Congress passed at the recent session and is intended to fill approximately 1 000 vacancies in the commissioned medical personnel of the Army This act of congress permits medical officers who served in the war to be appointed in the Regular Army and a special examination scheduled to be held July 7, 1920, is open only to physicians who were in the war

On account of the fact that only a comparatively small number of applications have been received it is the opinion of War Department officials that an additional call for applicants will be necessary to fill the vacancies that will be caused by the Army Reorganization Act No official information is available at the present time as to what method will be employed to secure additional medical officers It is quite certain, however that not more than 50 per cent of the 1 300 applicants will qualify physically and professionally for army service

Foreign Letters

PARIS

(From Our Regular Correspondent)

June 10 1920

Professor Calmette's Work on Tuberculosis

Anent the inauguration of the Pasteur Institute of Greece at Athens, THE JOURNAL (May 15, 1920 p 1411) mentioned the important work of Professor Calmette and his appointment as assistant director of the Pasteur Institute of Paris At a recent session of the Academy of Medicine, Dr Calmette presented a copy of his book "L'infection bacillaire et la tuberculose chez l homme et chez les animaux," recently published He found time to write this work during his isolation in Lille under German occupation, when he was possessed of a desire to contribute with all his might toward offsetting, by a better organized campaign against tuberculosis, the frightful loss of young lives which the World War exacted from France and the allied nations

Calmette characterized his book in the following words "I have set forth as clearly as I could my own researches on the pathogenesis of tuberculosis infection, on tuberculin reactions antibodies and immunity against tuberculosis But I have endeavored above all to set off as conspicuously as is merited the achievements of French British and American investigators very often ignored by German science Those who will read my work carefully will find I hope, that as concerns the latter I have shown the most rigorous impartiality" To the applause of members of the academy, the president congratulated Dr Calmette on his successful completion of so important a work despite the severe physical and mental strain endured during the occupation of Lille.

Civil Responsibility and Surgery

Two recent decisions of the court of appeals are particularly interesting because they show different aspects under which civil responsibility can be attributed to physicians or dentists The law of Nov 30 1892, governing the practice of medicine is silent on the subject [illegible] physicians surgeons and dentists therefore based on the general held responsible for the dama[illegible]

acts, but also through negligence and imprudence? In other words, whenever a mistake has occurred, responsibility is held to exist Now, as regards medicine, the courts have been very careful, for fear of trammeling initiative and paralyzing the progress of medical science For this reason it is admitted that if the interest of a patient requires it, the physician may, without incurring responsibility, apply a dangerous form of treatment He may employ an untried method, if he sees that there is no chance of success with the reputed and usual treatment but he must not employ a method or perform an operation the dangers of which are not justified by the gravity of the illness This was the basis of a decision by the court in a case of a young girl who was treated by roentgen rays for a slight growth of hair on the chin The court ruled that the physician committed a fault by the employment of a treatment the dangers of which were out of proportion with the end to be attained, since he was not treating a disease but only attempting to remove or hide a simple physical imperfection The physician should have refused to cooperate, by not doing so he incurred responsibility and as a result he was held liable for damages In another case there was a surgical mistake A dentist in attempting to remove a tooth root injured the maxilla The dentist alleged, it is true that the subsequent necrosis was due to the diseased condition of the patient The medical expert did not agree with this but held that there was evidence of a serious mistake on the part of the dentist

Industrial Strikes and the Public Health

Staff physicians and surgeons of the hospitals of Bordeaux have announced in the daily papers that because of a strike electric light and current have been wanting for most of their important services and it was therefore impossible to examine, operate on and nurse a large number of patients On the other hand, the pressure of gas has been too low for sterilizing water, instruments and dressings Under these conditions, many physicians and surgeons, despite their good intentions, are unable to continue their hospital service

LONDON

(From Our Regular Correspondent)

June 5, 1920

Statistics of the Medical Profession

In his address to the General Council of Medical Education, the president, Sir Donald MacAlister, said that on the home list in the new Medical Register only 872 physicians were registered in 1919, but no fewer than 450 were registered in the colonial and foreign lists The result was that the total number (1 322) of new names was higher than in any years since 1915 The proportion of women physicians was increasing and was likely to increase rapidly during the next year or two Their services were in less demand than during the war and newly qualified women were finding difficulty in obtaining suitable opportunities for professional work The profession of medicine was, in regard to women, affected like other occupations by the return to civil life of large numbers of ex-service men as students and physicians To those men the country owed special consideration, and they ought to receive it But inevitably they tended to displace a proportion of the women who so capably carried on the work of the profession during their absence abroad The Medical Students' Register indicated that the depletion of their professional ranks by the wastage of the war would in a few years be much more than made good by the addition of newly qualified men No fewer than 3 420 medical students (men and women) were registered in 1919, as compared with 1 600 in 1914 The number of registrations, indeed exceeded by more than 1,000 the highest previously recorded—namely, in 1891—when for special reasons the number rose to 2,405 This sudden increase could not at once be met by a corresponding expansion of their educational resources, and the strain thrown on the medical schools of the country was therefore for the time excessive In the departments of anatomy and operative surgery, of midwifery, and of clinical medicine, the existing provision was no longer fully adequate to the new demands The Dentists' Registry was stationary, but there was an assured prospect of an advance by the end of 1922, for the number of dental students entered in 1919 had risen to 612, as compared with 204 in 1914

A Tax on Physicians

South Africa stands alone in the British dominions in taxing the practice of medicine Physicians have to pay a tax of $50 a year, and dentists $75 for a license to practice in the Cape Province but in the Orange Free state physicians pay $75 Other professions—lawyers accountants, auditors, architects—are also taxed In the Cape provincial council a struggle was made in favor of young impecunious lawyers being exempt, but nothing was said for physicians One rural member rejoiced at physicians and lawyers being taxed, regarding both as parasites from which the state would be well rid

Censorship of Advertisements in the Medical Press

At a meeting of the Worcester County Council, a curious situation was disclosed In connection with a medical tuberculosis and school inspection scheme for the county, advertisements for ten physicians at salaries of $2 250 had been published Two were obtained, and it was proposed to repeat the advertisements, but when they were sent to the *Lancet* and the *British Medical Journal,* replies were received stating that advertisements could not be received which offered less than $2 500 for such posts A letter was also received from the ministry of health stating that tuberculosis officers should have special qualifications and experience, and doubting whether the salaries offered were sufficient The chairman of the council said that he objected to this sort of pressure being brought to bear on local authorities They had already got two gentlemen for $2 250 very suitable for the posts He felt averse to allowing the medical press to dictate what salaries they should give By a majority of votes it was decided to advertise for the officer in the daily press

Protection for the Medical Officers of Venereal Clinics

A deputation from the London and Counties Medical Protection Association waited on Dr Addison, minister of health, to urge the necessity for legislation to protect the medical officers of venereal clinics from being compelled in the witness box to violate the established principles of professional secrecy and to give information of the nature of their patients' ailments and of anything else that came to their knowledge in their professional capacity These medical officers are compelled under penalty of imprisonment to reveal what their patients communicate to them believing it to be absolutely confidential It was urged that the effect would be disastrous to the working of the clinics and militate against the efforts being made to cure and eliminate venereal disease Dr Addison expressed agreement with the views of the deputation and promised to do what he could to promote the legislation desired He felt sure that public opinion would support the maintenance of professional secrecy in connection with venereal clinics As has been pointed out before in THE JOURNAL, the law does not respect professional secrets in this country, and objections as strong as were urged by the deputation can be made against the legal position in general

A Bill for the Blind

In the House of Commons, Dr Addison moved the second reading of a bill to increase preventive services against blindness, against ophthalmia neonatorum in particular, to provide facilities for blind persons learning some trade, and to enable local authorities to provide and maintain or to contribute toward the provision and maintenance of workshops, hostels, homes and other places for the reception of the blind The bill also provides that persons so blind as to be unable to perform any work, and who are 50 years of age shall be entitled to receive the pension to which in ordinary circumstances they would be entitled only on attaining the age of 70

Report of the National Birth Rate Commission

The National Birth Rate Commission was instituted in 1913 by the National Council of Public Morals It issued its first report in 1916 (which was noticed in THE JOURNAL), discussing the causes and effects of the declining birth rate It has now issued a second report In a preliminary chapter the commission discusses the fall in the birth rate during the war years, the reduction amounting by 1918 to 26 per cent In the period 1915-1918 the loss of births attributable to the war was 543,000 Passing to what they term one of the most important causes of the decline in the birth rate, namely, voluntary restriction, the commission states that at present the decline of the birth rate is greater where the quality of the children might be expected to be better The child bearing is at present relatively the greatest among families and in homes in which the economic and social conditions do not allow of the healthy and proper upbringing of so many children The reduction is taking place in the average size of the families in always greater degree in those classes in which the condition for the welfare and education of the children is the best This disproportion in relative birth rates is an ominous sign for the future of the nation and the empire While there is wisdom in the purpose not to incur responsibilities which cannot be met, it may easily pass into a timidity which shrinks from what might prove a sacrifice good for the character and bringing joy of heart Comfort and ease not to mention luxury, are not necessarily the best conditions for the personal development of either parents or children The refusal to accept the burden of parenthood on unworthy grounds is not only often an evidence of selfishness, but if it becomes general, will have as its consequence a slacking of the moral fibers of the nation The responsibility of the country to parents in the discharge of their obligations must equally be asserted If the community desires an adequate number of children of good quality, it must be prepared to see that the burdens which weigh too heavily on many parents are relieved Among the reforms that have been proposed are proper housing a living wage, training for and care of motherhood and infancy, facilities for education and relief from taxation proportionate to the responsibilities involved The need for a properly regulated redistribution of the population with special regard to the due proportion of the sexes in the empire is considered one of the most important methods of relieving the burden of parenthood in large families Various schemes for the endowment of motherhood were considered but having regard to the economic and other difficulties of the question the commission does not recommend any of them It would, however, regard with sympathy any plan by which a reasonable provision, similar to that made for the widows of sailors and soldiers, would be made for widows of men in civil employment who are left with young children and even for the wives in like circumstances whose husbands are incapacitated With regard to the problem of illegitimacy, the commission finds that, although the decline in legitimate births has alarmed the country, and the illegitimate child has come to be regarded as helping to make up for the deficiency of births in wedlock there is no evidence that public opinion has as a whole undergone any fundamental change of attitude toward the unmarried mother nor are there any signs of such a change Statistics for 1918 show that illegitimate births have increased by 11 6 per cent, while legitimate births have decreased by 1 6 per cent As a result of these changes (which are due to the war) the proportion of illegitimate to total births which fell to a minimum or 3 95 per cent in 1901-1905 has now risen to 6 26 per cent the highest ratio reached during the last fifty years There is urgent need for (*a*) more accommodation for the unmarried mother and her child, and (*b*) more efficient guardianship of the illegitimate child It is recommended that carefully supervised hostels should be set up in which mothers can care for their children and at the same time learn a trade, or become efficient in domestic work. The emotions of growing boys and girls should be trained and guided by parents and competent teachers in order to avoid and counteract the general ignorance and that half knowledge which is even more dangerous Great issues for the nation and the empire are involved in the steady decline of the birth rate In the event of a war similar to that which we have just experienced, what would happen to us with a greatly reduced birth rate? As it is, the position is most disquieting for the indications are that in the homeland the population may not continue to increase, while in the dominions oversea, without the aid of immigration, it will not at the present rate increase greatly, at least from additions of the British stock All these enormous lands, with their countless native races we hold with under 60 000 000 of white people of whom 45,000,000 dwell in these little islands But unless we add to our numbers, for how long shall we be able to fulfil our obligations in the face of recent developments of race ambitions? Extensive settlements on the land would mitigate the evil, but modern men and women will not settle in numbers on the land As our own experience and that of Australia show, they prefer the city and the cinema The commission holds that intra-imperial migration would tend to remove many of the dangers and injuries to the race which depend on extreme urbanization, and the reliance on imported food and in the interests of racial morals they urge the imperial government, in conjunction with the dominions, to direct itself to the problem Intra-imperial migration in its view, should be regarded as a matter of imperial health and safety, and should be controlled accordingly

Marriages

CHARLES TEACKLE CARTER BUCKNER Capt, M C U S Army Fort Sill Okla to Miss Mildred Alston Lee, at Montgomery, Ala June 17

HERMAN GAILEY Baltimore, to Miss Mary Elizabeth McConkey, at McClellan Heights York, Pa June 17

JOHN W HANNER, Col M C U S Army to Miss Gertrude Kersey Jones at San Francisco, April 22

ARTHUR TREW BLACHLY Portland Ore to Miss Mary Elizabeth Cole of Forest Grove, Ore May 29

HERBERT WARREN CANFIELD Baxter Iowa to Mrs Matie L Hager, at Des Moines, Iowa June 16

JACOB FRANK HENKEN Racine Wis to Miss Ethel Christine Roose of Sycamore Ill, June 12

GEORGE ANASTASIOU PETRULIAS to Miss Edith J Blum both of Bethlehem Pa June 4

TRIMBLE CLARENCE JOHNSON to Miss Alice Anderson both of Atlanta, Ga June 22

HOWARD SCULL BRANIN to Miss Mal
Millville N J June 16

Deaths

Albert Henry Gieschner, Tacoma, Wash., University of Maryland, Baltimore, 1901, aged 44, first assistant surgeon to the Northern Pacific Railway Hospital, Tacoma, who served before the United States entered the World War in German field hospitals and also in Bulgaria and Constantinople, died, June 9, in the Northern Pacific Railway Hospital, Tacoma, from complications following an operation for appendicitis several weeks before

Karl August Gunnar Sundstrom, Chattanooga, Tenn., Chattanooga Medical College 1908, aged 35, lieutenant-colonel (emergency) M. C. U. S. Army, a member of the Tennessee State Medical Association, who was undergoing reconstruction at the United States General Hospital, Oteen, N. C., died in that institution, June 1

Harold James Morgan ⊕ Toledo Ohio, College of Physicians in the City of New York, 1895, aged 47, professor of pediatrics in Toledo Medical College, for seven years director of the children's department of the Maternity Hospital, captain, M. C., U. S. Army, and discharged Dec. 24, 1919, died in Cleveland, June 7

William Thomas Stephenson, Kirksville Mo., St. Louis College of Physicians and Surgeons 1892, aged 62 postmaster at Browning Mo. under the Cleveland administration and later a druggist of Kirksville, for two years owner and publisher of the Kirksville *Democrat*, died, May 27 from cerebral hemorrhage

William C. Crutcher, Mt. Vernon, Texas, University of Louisville, Ky., 1883 aged 59, a member of the State Medical Association of Texas once president of the Northeast Texas Medical Association, local surgeon of the Cotton Belt system, founder of the Crutcher Sanitarium, died June 2, from pneumonia

Joseph A. Jennings ⊕ Pittston, Pa., Jefferson Medical College 1896, aged 46, also a graduate in pharmacy, a member of the staff of the Pittston Hospital, for three years physician for the Pittston Poor Board and for five years a member and secretary of the city school board, died at White Haven, Pa., June 5

Admiral L. R. Avant, Savannah Ga., Atlanta (Ga.) Medical College 1893, aged 63, a member of the Medical Association of Georgia, a member of the staff of Parkview Sanitarium, city physician of Savannah, also an ordained minister, and a pharmacist, died June 7, from uremia

Charles Jordan, Wakefield Mass., Dartmouth Medical School Hanover N. H. 1859, aged 91, a member of the Massachusetts Medical Society, and for sixty-one years a member and once president of the Middlesex East District Medical Society, died June 6, from senile debility

Thomas Wilson Lambert, London England, University of Cambridge England 1889, L.R.C.P. (Lond.), and M.R.C.S. (Eng.), 1890, for many years a practitioner of Kamloops B. C. and medical officer in charge of the western section of the Canadian Pacific system, died April 10

Robert L. Ashbrook ⊕ Washington Pa., College of Physicians and Surgeons Baltimore 1886, aged 56, died June 6, from the effects of a gunshot wound of the head self-inflicted it is believed, with suicidal intent while despondent on account of ill health

George Gile Kerns, Leola, S. D., Sioux City (Iowa) College of Medicine 1906, aged 38, a member of the South Dakota State Medical Association, died in Aberdeen, April 19, from the effects of the accidental swallowing of a pin, six months before

John Hamilton Ellis, New Orleans, Tulane University of Louisiana New Orleans, 1888 aged 54 a member of the Louisiana State Medical Association, and state registrar of vital statistics in the state board of health, died, June 2, from uremia

Daniel Edwin Stone, Jr ⊕ Emmitsburg Md., University of Maryland Baltimore, 1900 aged 44 lieutenant, M. C., U. S. Army and on duty at Camp Green N. C., died in the Frederick City (Md.) Hospital, June 13, after an operation for appendicitis

James P. Lynch, Chicago, Bennett College of Eclectic Medicine and Surgery Chicago, 1883, aged 63 a member of the Illinois State Medical Society, died, June 26, from septicemia following an infected wound of the finger

Frederick Adryan Hoyer, Paducah, Ky., Hospital College of Medicine, Louisville Ky., 1902, aged 47, a member of the Kentucky State Medical Association, captain, M. C., U. S. Army, and discharged November, 1918, died, June 3, from meningitis

Thomas E. Lucas, Chesterfield S. C., Medical College of the State of South Carolina Charleston 1859, aged 84, major of the Eighth South Carolina Infantry, C. S. Army, during the Civil War, died June 12, from heart disease

William J. Conner, Labette Kan., Cincinnati College of Physicians and Surgeons 1862, aged 84 once state senator, for fifty-three years a practitioner of Kansas, died at the home of his daughter in Parsons Kan. June 1

Joseph G. Crawford, Hahnemann Medical College of the Pacific San Francisco, 1892, aged 80, a director of the Sawtelle Chamber of Commerce, surgeon of U. S. Volunteers during the Civil War, died, June 4

Harry LaRue, Dexter, Mo., University of Louisville, Ky., 1897, aged 52, a member of the Missouri State Medical Association local surgeon of the Iron Mountain system, died, May 27, from cerebral hemorrhage

Henry Weil, New York, Medico-Chirurgical College of Philadelphia 1897, aged 45 a member of the Medical Society of the State of New York, died at his summer home at Harmon-on-the-Hudson May 30

Maria Louise De Pew Crothers, Bloomington Ill. Woman's Medical College of Pennsylvania, Philadelphia 1883, aged 86 for four years in charge of the Girls Industrial Home of Bloomington, died May 31

Edward Parmer Partlow, Constantine Mich., Detroit College of Medicine and Surgery 1894, aged 59, a member of the Michigan State Medical Society, health officer of Constantine, died about June 4

Charles Carpenter Valle, San Diego Calif., Washington University St. Louis 1879, aged 70, at one time an officer of the United States Public Health Service at Tia Juana, Mexico, died June 5

Aloysius Peter Renneker, Cincinnati Medical College of Ohio Cincinnati, 1879, aged 65, a member of the Ohio State Medical Association, died at the home of his son in Cincinnati, June 4

John Harris Werner ⊕ Chicago, Chicago College of Medicine and Surgery 1911, aged 46, died June 21 from septicemia following a wound received while performing an operation

Charles Pitt Holmes, Fort Gaines Ga., Atlanta (Ga.) Medical College 1891, aged 59, a member of the Medical Association of Georgia, died in his office May 31, from acute gastritis

David D. Smith, Philadelphia, Jefferson Medical College, 1878, aged 80, formerly dean of the faculty of the Philadelphia Dental College, a veteran of the Civil War, died, June 4

Rafael Garcia de Quevedo, San Juan Porto Rico, University of Maryland Baltimore 1920, aged 24, was accidentally drowned in the Severn River, near Severn Side Md. June 7

Morris Franklin Coglan, Hamilton Ont., Queens University, Kingston, Ont. 1916 aged 40, died in the City Hospital, Hamilton February 20 from pneumonia following influenza

James Conquest Cross Barker, New Milford, Conn., Yale Medical School, New Haven, Conn. 1879, aged 68, died, June 16 from a ruptured aneurysm of the abdominal aorta

John G. Thomas, Monticello Iowa, University of Wurtzburg Germany, 1878, aged 69, a member of the Iowa State Medical Society, died, June 11, from cerebral hemorrhage

William M. Mason, Hazel Ky., University of Louisville, Ky. 1875, aged 78 at one time president of the West Tennessee Medical Society, died, June 7, from heart disease

Joseph Patrick Guinan ⊕ Lima N. Y., Georgetown University, Washington, D. C., 1908 aged 38, health physician and registrar of vital statistics of Lima, died May 31

George Boardman Cornell, Brooklyn University of the City of New York 1864, New York Homeopathic Medical College, New York City 1871, aged 87, died June 17

Christian Schneider, Cross Village, Mich. (license, Michigan 1902), aged 74, a member of the Michigan State Medical Society, a practitioner since 1865, died, March 29

Robert Jenkins Henry, Glyndon Md. University of Maryland Baltimore, 1866, aged 74, died, June 7, from paralysis

Abraham J. Keightley, Louisville University of Louisville, Ky., 1867, aged 73 died in Louisville City Hospital, June 7

⊕ Indicates Fellow of the American Medical Association

George Campbell, Detroit, Detroit College of Medicine and Surgery, 1887, aged 60, a member of the Michigan State Medical Society, died in Pasadena, Calif, April 16

Charles MacLachlan, Elwell Mich, Eclectic Medical College of Maine, Lewiston 1882, aged 74, a member of the Michigan State Medical Society, died, March 17

William Franklin Harper ⊕ Mt Vernon, N Y, Cincinnati College of Medicine and Surgery, 1879, aged 65, was killed, June 16, in a railway accident, near Rene, Colo

William Edwin Baker, Duncanville Texas, University of Tennessee, Nashville 1882, aged 62, a member of the State Medical Association of Texas, died May 29

Rufus Edwin Donnell, Gardiner Me, Dartmouth Medical School Hanover N H, 1889, aged 61, a member of the Maine Medical Association, died, May 23

Louis Francis Smiley, Philadelphia, Hahnemann Medical College, Philadelphia 1875, aged 69, died at the home of his brother in Chambersburg, Pa, June 12

Herbert Tetlow, Westerly, R I, Western Reserve University, Cleveland, 1899, aged 49, was found dead in his apartments from a gunshot wound, June 11

Frederick R Greene, Albany, N Y, Albany (N Y) Medical College, 1884, a member of the Medical Society of the State of New York, died, June 6

Christopher Eugene Lett, Emporia, Kan, Washburn College Medical Department, Topeka, Kan, 1909, aged 54, died, April 7, from cerebral hemorrhage

William Henry Falls ⊕ Cleveland, Miami Medical College, Cincinnati 1873, aged 70, for thirty-five years a practitioner of Cincinnati, died, June 7

George Washington Fisher, Laporte City, Iowa, Chicago Homeopathic Medical College, 1877, aged 65, died, June 1, from cerebral hemorrhage

John W Potts, Lacon, Ill, Eclectic Medical Institute, Cincinnati 1871, aged 75, a veteran of the Civil War, died, June 13, from myocarditis

Frank M Owens, Remmel, Ark (license nongraduate, Arkansas, 1903), aged 45, died in Amagon, Ark, March 25, from cerebral hemorrhage

John Moffet, Philadelphia, Jefferson Medical College, 1892, aged 54, also a graduate in pharmacy, died suddenly at Audubon, N J, May 30

Guy Lawton Bush, Atlanta Ga, Atlanta (Ga) College of Physicians and Surgeons, 1908, aged 36, died in a sanatorium in Atlanta, June 7

Edward Lanning Sheldon, Tacoma, Wash, Medical College of Eclectic Medicine and Surgery, Chicago, 1873, aged 74, died, May 31

Leslie J Foley, Montreal, Que, University of Bishop College, Montreal 1880, M R C S, L R C P (Eng), 1881, aged 60, died, April 9

Treby William Lyon ⊕ New Haven, Conn, Yale University New Haven, 1903, aged 39, a specialist in proctology, died, June 14

Horace Griswold Pease, Tacoma, Wash, a practitioner since 1855, aged 95, died April 27, from chronic interstitial nephritis

William Watson Wetherla ⊕ Chicago, Chicago Medical Society, 1885, aged 71, died, June 2, from cerebral hemorrhage

Charles E Barmm, Indianapolis, Eclectic College of Physicians and Surgeons, Indianapolis, 1893, aged 59, died, June 11

William J McNair, Quitman Miss, University of Alabama, Mobile, 1885, aged 73, died in a hospital in Quitman, June 7

Oscar H Fischer, St Louis, Washington University, St Louis, 1899, aged 44 died, June 14, from cerebral hemorrhage

Charles Stuart Wall, Wakeeney, Kan (license, Kansas, 1901), aged 68, died, April 13 from valvular heart disease

Julia Virginia Downes, Washington D C, Southern Homeopathic Medical College, 1895, died, about June 9

William Willard Armstrong, New York City, Bellevue Hospital Medical College, 1897, aged 53, died June 9

W R O Veal, Martel Fla, a practitioner for fifty years, aged 80, died, March 10, from acute cystitis

Xavier Bichat Haynie, Gallatin, Tenn University of Nashville, Tenn, 1873, aged 72, died June 11

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

THE LOWENTHAL POSTGRADUATE COURSE

Which Tells How to Make Diagnoses Accurately, Scientifically Check the Christian Scientists and Increase Your Earning Power

During the past year THE JOURNAL has received letters from physicians in various cities asking for information regarding the Post Graduate Course of Lectures and Clinics on Nervous and Mental Diseases' which was going to be given in their respective cities by Dr Albert A Lowenthal of Chicago The following inquiries are typical

To the Editor—Please note the enclosed letter from the American Organotherapy Company which appears to be conducted by Lowenthal The proposition of conducting these clinics impresses me as a piece of colossal gall which is amazing even in these days Do you know any thing about this matter?

To the Editor—Who the dickens is Albert A Lowenthal M D? Note the circular enclosed I have blue circled the remarks he evidently thinks will attract

In May, 1919 Chicago physicians received a form-letter signed and on the stationery of Albert A Lowenthal notifying them that Dr Lowenthal was about to 'give a Post Graduate Course of Lectures and Clinics on nervous and mental diseases" in the "Banquet Hall Morrison Hotel" Enclosed was a 'Programme and Reservation Card" and a self addressed envelope for physicians to notify Dr Lowenthal that they would be present In addition to showing physicians how to make diagnoses accurately" Dr Lowenthal offered to "explain fully how to scientifically check the Christian Scientists and increase your earning power!" And all for nothing!

At later dates similar letters were received by physicians in other cities, on the stationery of the "American Organotherapy Company, Room 902 31 North State St Chicago" Dr Lowenthal whose Chicago office is Room 901, 31 North State St is apparently president treasurer and practical owner of this company Enclosed with each of these letters—which offered the same inducements, free—was an envelope addressed to Albert A Lowenthal in care of the hotel at which Dr Lowenthal would stay while in that city There was also a 'Programme and Reservation Card' as in the case of the letters sent to Chicago physicians

According to our records, Dr Albert A Lowenthal was born in Chicago in 1874 and was graduated by the College of Physicians and Surgeons, Chicago, in 1895, receiving his license the same year

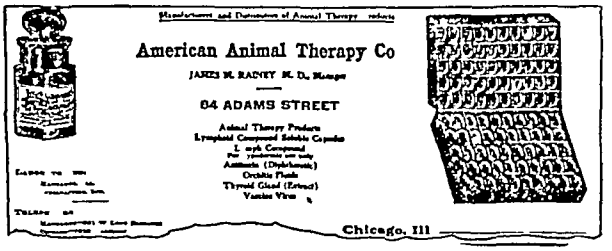
In a leaflet issued some time ago by Albert A Lowenthal, M D, 'for the sole purpose of enlightening Prospective Patients in regard to the therapeutic value of the Organo Therapy Treatment for Nervous Diseases," we learn that Dr Lowenthal is, or was

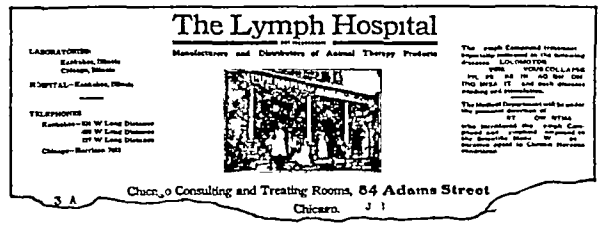
Professor Nervous and Mental Diseases Chicago Hospital College of Medicine
Formerly Professor Nervous and Mental Diseases Dearborn Medical College Jenner Medical College
Adjunct Profes or on Neurology and Psychiatry, University of Illinois College of Medicine
Formerly Physician Illinois Eastern Hospital for the Insane'
Formerly Supt Riverview Hospital for Nervous Diseases Kankakee Ill
Formerly on Advisory and Associated Attending Staff Cook County Hospital

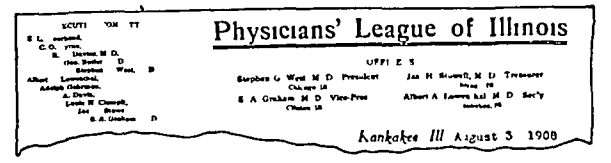
In Polk's Medical Directory for 1904 Dr Albert A Lowenthal's name appeared under Chicago, at 910 912 Chicago Opera House Building He was described as Superintendent of Lowenthal's Sanitarium In the same issue of the directory there was a display advertisement of the Lowenthal Sanitarium which while located at Kankakee Ill had its main offices' at 912 Chicago Opera House Bldg, Chicago

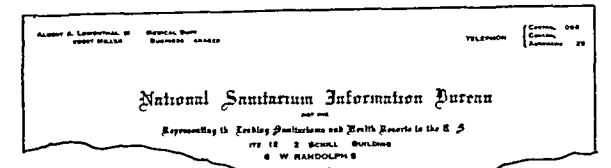
he advertisement was headed "GOAT LYMPH TREAT-IENT," and read in part

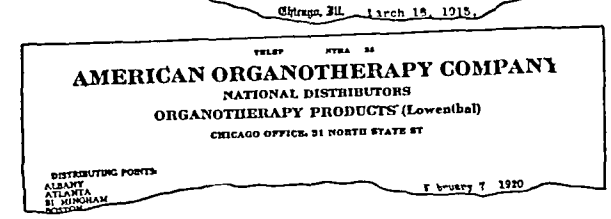
"Goat Lymph has revolutionized medicine and has been adopted by e scientific medical world as the only therapeutical agent that will solutely bring about positive results in chronic conditions such as eurasthenia Nervous Collapse Paralysis Locomotor Ataxia Brain ag Oncoming Insanity Chronic Stomach Disorders in fact such dis ises needing cell stimulation'











Some letterheads (greatly reduced) of concerns in which Dr Albert A Lowenthal has been interested

It mentioned further that Dr Albert Lowenthal "introduced Goat Lymph to the medical world as a curative agent

A few years ago a Chicago concern, known as the "American Animal Therapy Co," put out such products as 'Lymphoid Compound (Lowenthal)" 'Ova Mammoid (Lowenthal)," "Prostoid (Lowenthal),' etc The American Animal Therapy Co had for its manager James M Rainey Rainey also operated the 'Rainey Medicine Co ' a mail-order patent medicine" concern that sold "Vitaline" a "general debility cure The Rainey 'Vitaline' quackery was exposed in THE JOURNAL Oct 1 1910 and the matter appears in Nostrums and Quackery"

When the American Animal Therapy Company was operating from 84 Adams St Chicago, it claimed to have a hospital and laboratory at Kankakee At the same time letters were being sent out on the stationery of 'The Lymph Hospital" signed Albert A Lowenthal M D Although this 'hospital' was at Kankakee Ill, the address on the stationery was 84 Adams St, Chicago, and its telephone number was that of the American Animal Therapy Company According to the stationery, the 'Medical Department of the Lymph Hospital was "under the personal direction of Dr Albert A Lowenthal who introduced the Lymph Compound and Lymphoid Compound to the Scientific Medical World as a curative agent in Chronic Nervous conditions" A layman received a letter from the "Lymph Hospital" urging him to take "Lymphoid Compound" Later he received a "follow-up' letter, from which the following extracts are made Capitals used as in the original

Do you know that the doctors of this country are using the LYMPHOID COMPOUND EXCLUSIVELY in all cases where the nervous system is greatly involved with the most MARVELOUS RESULTS ISN'T THAT SUFFICIENT PROOF as to the merit of the remedy?

Nobody can tell you there is something just as good because THERE IS NOTHING JUST AS GOOD AS THE LYMPH — in fact IT IS THE ONLY THING THAT CAN BE DEPENDED UPO

Our Dr Lowenthal gives his personal attention to all cases at the Hospital and devotes a portion of his time advising by mail those persons under treatment who are unable to come to the Hospital He is a man of WORLD WIDE REPUTATION IN TREATING NERVOUS DISEASES — HIS ADVICE ON CASES LIKE YOURS IS WORTH EVERYTHING TO YOU

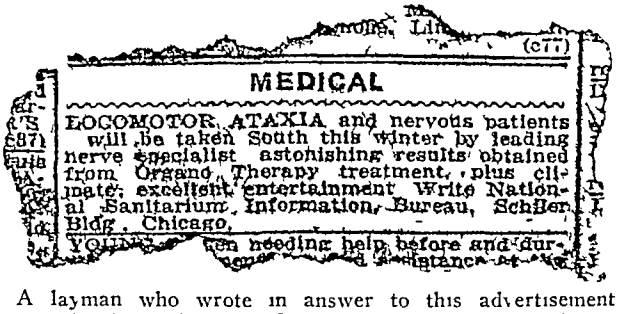
Think this over and if you do you will write an order today for the Lymphoid Compound The home treatment costs $9 50 for thirty three days—think of that You have our physician's advice and care free of charge — could anybody offer more to you?

In 1908 Dr Lowenthal appeared as a witness for Edward R Hibbard who was being prosecuted by the federal authorities Hibbard operated a "men's specialist office in Chicago, it had two entrances and a different name for each entrance—the "Boston Medical Institute" and the "Bellevue Medical Institute" Hibbard was found guilty of fraud in the operation of this concern and was fined $1,500 The transcript of the testimony in the Hibbard case records that Dr Albert A Lowenthal when on the stand claimed to "have treated as many nerve patients as any nerve specialist in Chicago" He further declared, according to the transcript, that physicians who make a specialty of nervous diseases "mature in about ten years" and that after that time most of them become nervous wrecks or insane This was in 1908 In this connection it is worth noting that in letters sent out by Lowenthal in May, 1919 he claimed

In the past twenty five years I have limited my work to neurological and psychological cases

In 1908 also, Dr Lowenthal was sending out letters to Illinois physicians in his capacity as Secretary of the "Physicians' League of Illinois" The 'league' issued a 'report on candidates for governor and members of legislature" giving the names of the various political candidates for office whom 'the members of the league can safely support" There were no "membership' fees and a physician who wrote asking 'who foots the bills" received no reply

In 1915 Albert A Lowenthal, whose "valuable discoveries in the domains of Organo Therapy, Neurology and Pediatrics, have given him an international reputation as a Neurologist Alienist and Climatological Expert of high standing' was Medical Superintendent of the "National Sanitarium Information Bureau" This purported to represent the 'Leading Sanitariums and Health Resorts in the U S The 'Bureau' expected to make its 'profit from the 10 per cent honorarium received on every referred patient" The 'Business Manager' of this concern was one Hubert Miller M D The following advertisement appeared in the classified department of the *St Louis Post Dispatch* in 1915



A layman who wrote in answer to this advertisement received a letter from Dr Lowenthal in which he said that it was his intention to take about thirty patients south with him for four months—cost of trip $500 which includes medical treatment, board etc Dr Lowenthal stated further

I have treated probably more cases of Locomotor Ataxia and Paralysis than any Physician in United States and can honestly state that with Organo Therapy Treatment your walk can be improved and pains controlled

In March, 1919, Dr Lowenthal paid a visit to Spokane, Wash, and Portland, Ore A Portland paper heralded his coming and printed a picture of "Dr A A Lowenthal, World famous alienist" The paper described Dr Lowenthal as "the alienist consulted in the Harry Thaw case" and the one "who treated John Alexander Dowie of Zion City fame and Pope Leo XIII" The fulsome puffery that Dr Lowenthal got while in Spokane drew criticism from one or two members of the local medical profession, who wrote to the newspapers protesting One of the physicians who thus wrote declared that Lowenthal's "coming was announced in a circular sent through the Owl Drug Company which is agent for the sale of products of an organo-therapy company"

Apparently, it was after Dr Lowenthal's return from the Pacific Coast that he commenced to announce his "Post-Graduate Course of Lectures and Clinics" to the physicians of Chicago Denver, St Louis, Columbus, etc—and, incidentally, to bring to the attention of the medical world the alleged virtues of the products of the American Organotherapy Company

Correspondence

THE INCIDENCE OF EXOPHTHALMIC GOITER IN NEGROES

To the Editor —Having recently had in Barnes Hospital a case of exophthalmic goiter in a negro woman, I thought it would be of interest to determine if possible, the relative incidence of this disease in the colored race, as shown by the patients who visit the dispensary The outpatient clinic of the hospital was opened in December, 1914, and since that time there have been 92 000 admissions, including white people and negroes, above the age of 15 years As it was impossible to determine the exact proportion between the races without looking over each card, the following scheme was adopted Through the cooperation of the admitting officer of the dispensary, each new patient was tabulated for a period of a month and it was found that 31 5 per cent of the total number were negroes As there have been 92,000 admissions since 1914, the proportion would be 63,000 whites and 29 000 negroes

In the 63 000 whites there have been eighty-eight cases of exophthalmic goiter, a percentage of 0 13 In the 29,000 negroes there were nine cases or 0 03 per cent These nine cases were all females It must be remembered, however, that white persons are better informed as to the symptoms of exophthalmic goiter, and of various symptoms of hyperthyroidism, some are sent in on account of suspected exophthalmic goiter Negroes are in general less likely to describe the symptoms of such diseases, and are often less minutely examined than white patients

Although the figures I give show the incidence of exophthalmic goiter in a well organized outpatient service, it is probable that a more careful scrutiny would reveal other and less marked cases T C REDFERN, M D, St Louis

d-l-ARABINOSURIA

To the Editor —This condition, of which only forty cases have apparently been reported, occurs in a patient of mine who now, for three or four years has exhibited the same want of resistance to staphylococcal infections as do cases of the more commonly seen glycosuria No treatment yet tried has given immunity He has had chronic intestinal stasis for many years and has much enteroptosis, but under the regimen of the last year his general health has on the whole been greatly improved, and the urine does not now exhibit indican, indol tyramin, etc in any constant amount He is quite refractory to autogenous vaccines of staphylococci even up to repeated doses of $20,000 \times 10^6$ of detoxicated *Staphylococcus albus* and *aureus*

This condition is said to be congenital and to occur among Jews especially My patient is a Jew

I shall esteem it a favor if any readers of THE JOURNAL with special experience in these cases will inform me whether they too have encountered this chronicity of boils and carbuncles and abscesses in the proved absence of glucose and lactose in such arabinose-excreting patients, and whether they have found any means of conferring immunity

A WHITE ROBERTSON, L.R.C.P.E.
52 Welbeck Street, W 1, London, England

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

HEYL PRODUCTS NOT ACCEPTED

To the Editor —In a recent number of the *American Journal of Surgery* there is an advertisement by the Heyl Laboratories Inc for Acriflavine and Proflavine The advertisement states that these products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies In the 1920 edition of N N R I do not find the Heyl products listed although there is a description for Acriflavine and Proflavine Will you please tell me whether or not the Heyl brands of Acriflavine and Proflavine have been accepted by the Council on Pharmacy and Chemistry? G S A M D

ANSWER —We are informed by the secretary of the Council on Pharmacy and Chemistry that the Heyl brands of Acriflavine and Proflavine have been examined by the Council However they were not accepted for inclusion with New and Nonofficial Remedies because (1) the quality did not conform to the Council's standards and (2) in the advertising for the drugs the manufacturer failed to refer to the unfavorable as well as the favorable clinical reports Although informed of the facts some months ago the manufacturer has made no efforts to date to have his products accepted The advertisement cited principally describes "Acriflavine G H' and Proflavine G H ' the G H" probably representing the initials of George Heyl, one of the proprietors of the Heyl Laboratories, Inc The statement in the advertisement that Acriflavine and Proflavine have been accepted by the Council on Pharmacy and Chemistry of the A M A for inclusion in New and Nonofficial Remedies" is misleading in that the reader is likely to infer that the Heyl products have been accepted which is not the case

ANTIDOTES FOR SNAKE POISONING

To the Editor —What information can you give me in regard to Anti Venom antidote for snake bite poison manufactured by the Monarch Drug Company Inc San Diego Calif? W G H

ANSWER —We have no information concerning the Anti-Venom antidote manufactured by the Monarch Drug Company of San Diego Calif Neither this nor any other antivenom for snake poisoning has been accepted by the Council on Pharmacy and Chemistry So far as we know, the United States Treasury Department has issued no license to sell antivenoms for snake poisoning in interstate commerce except to the Pasteur Institute

Experiments made principally in France looking toward the production of antivenoms for snake poisoning by biologic methods seem to have met with some success but the use of such products in therapy is still in the experimental stage In general these studies have shown that the various neurotoxins and hemotoxins of the different poisonous snakes are dissimilar in many respects and that an antivenin which has been prepared against the venom of one species (and is in a sense a specific for that poison) is not always effective when used against the venom of another species Obviously, it is impossible to place therapeutic antivenins for every species of poisonous reptile within the reach of the practitioner In some laboratories of India France and Brazil antivenins are prepared from the most abundant species of snakes in the respective countries

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA Montgomery July 13 Chairman Dr S W Welch Montgomery
ARIZONA Phoenix, July 6 7 Sec Dr Ancil Martin, 207 Goodrich Bldg Phoenix
COLORADO Denver, July 6 Sec, Dr David A Strickler 612 Empire Bldg Denver
CONNECTICUT Hartford July 13 14 Sec Regular Board Dr Robert L Rowley 49 Pearl St Hartford
CONNECTICUT New Haven July 13 Sec Eclectic Board Dr James Edwin Hair, 730 State St Bridgeport Sec Homeo Board Dr Edwin C M Hall 82 Grand Ave New Haven
DISTRICT OF COLUMBIA Washington July 13 15 Sec, Dr Edgar P Copeland The Rockingham Washington
INDIANA Indianapolis, July 13 15 Sec., Dr Wm T Gott Crawfordsville
MAINE Portland July 6 7 Sec Dr Frank W Searle, 140 Pine St Portland
MASSACHUSETTS Boston July 13 15 Sec Dr Walter P Bowers Room 144 State House Boston
NEW MEXICO Santa Fe July 12 13 Sec Dr R E McBride Las Cruces
NORTH DAKOTA Grand Forks July 6 9 Sec, Dr Geo M Williamson 860 Belmont Ave Grand Forks
OKLAHOMA Oklahoma City July 13 14 Sec Dr James M Byrum Mammoth Bldg, Shawnee
OREGON Portland, July 6 Sec Dr Urling C Coe 1208 Stevens Bldg, Portland
PENNSYLVANIA Philadelphia and Pittsburgh July 6 10 Sec, Dr Thos E Finnegan, State Capitol Harrisburg
SOUTH DAKOTA Deadwood July 13 Sec Dr Park B Jenkins Waubay
UTAH Salt Lake City, July 5 6 Sec Dr G F Harding 405 Templeton Bldg Salt Lake City
WASHINGTON Seattle, July 6 8 Sec Dr Wm M O'Shea 505 Old National Bank Bldg Spokane
WEST VIRGINIA Charleston July 13 Sec Dr S L Jepson Masonic Bldg Charleston

Porto Rico April Examination

Dr Quevedo Baez, secretary, Porto Rico Board of Examiners reports the written and practical examination held at San Juan, April 12, 1920 The examination covered 12 subjects and included 120 questions An average of 75 per cent was required to pass Seven candidates were examined all of whom passed The following colleges were represented

College	PASSED		Year Grad	Per Cent
Georgetown University			(1918)	75
American Med Missionary College			(1906)	84 5
Johns Hopkins University			(1918)	86 2
University of Maryland	(1917)	84 6	(1919)	88 3
Tulane University			(1919)	79 1
University of Havana			(1919)	92 3

THE FOUNTAIN-HEAD OF CHIROPRACTIC, WHAT OF ITS PRODUCT?

The Palmer School of Chiropractic advertises itself as the fountain-head" of chiropractic The following will give some intimation in regard to the character of the stream' that comes from it

The 1920 annual announcement of this school states that students are taught not only 'how to act with patients in and out of the office' but also 'how to successfully advertise" From the beginning therefore methods are taught which, from the time of Hippocrates have been looked on as quackery It is also stated that the students complete their 'freshman sophomore," junior' and senior' courses in four months each, or altogether in sixteen months In another place the reader is informed that in case the student finds it impossible to remain for more than twelve months the school will nevertheless confer on him the degree of D C (Doctor of Chiropractic) By remaining at the school six months longer he would be granted an additional degree that of Ph C (Philosopher of Chiropractic) if he got an A grade on each and every paper submitted '

The statement that a "common school" education is required for admission may mean nothing more than the bare ability to read and write Granting, however that it is the equivalent of the eighth grade in the public schools, the professional training, according to the usual methods of calculating standards in general education, would be considered of no higher grade than that of one or one and a half years of high school work This low entrance qualification is in marked contrast to the requirements for admission to medical schools in which students must have completed a four year high school course and in addition two years of work in a reputable college of arts and sciences, including courses in physics chemistry and biology

Another significant statement in this announcement is that a student 'may matriculate on any week day" This indicates at once that no intensive course of study is given in this institution such as is required in medical schools No student entering a medical school a week or more after the opening of any laboratory course (for example, histology, pathology or bacteriology) could possibly be able intelligently to carry on the work in such courses because of the large amount of work missed during the previous weeks absence Evidently, there are no such disagreeable handicaps in the study of chiropractic

The *announcement of this school states that in its "scientific course'* the student is required 'to attend (note the exact figures) a total of 4 103½ class hours This would be fifty-three hours a week for eighteen months, or eighty hours a week—twelve hours a day—for a calendar year Education does not depend on the number of hours of instruction however so much as on the subject-matter taught and the ability of the instructor to impart knowledge As a matter of fact, the requirement of *actual class-room* work in our highest grade medical schools in four college years of from eight to nine months each is only about 4 000 hours Each class hour, however presupposes from one to three hours of outside preparation so that if measured by the claims of this chiropractic college the total hours required by medical schools would be somewhere between 8 000 to 12 000 hours!

The textbooks used also are interesting In anatomy, the text used is said to be that prepared by Mabel H Palmer D C Ph C (1905) the wife of B J Palmer who is the president of the institution Court reports in 1910 show that the latter had only a common school education and had never matriculated in any school, college or university, other than a chiropractic college For those who never had a training in the scientific methods of treating the sick an attempt to teach others how to do so is equal to 'the blind leading the blind Textbooks of their own writing are also used by the teachers in symptomatology gynecology and chemistry who likewise have no degrees in medicine Incidentally, the sale of these textbooks adds considerably to the revenue obtained from students

Speaking of revenue besides the income from textbooks this institution charges for its twelve or eighteen months' course a spot cash" sum of $300—more than a year's tuition last year in any of the highest grade medical schools of the country! If the fee is paid in "deferred payments,' it is $350 If a husband and wife however, take the course the combined fee 'spot cash is $375 or if in 'deferred payments," $450 Reports of inspection of this school show that there are few if any all-time teachers Such few laboratories as the school possesses are reported also to have the barest minimum of equipment Most of the fees obtained therefore must be clear profit This is in marked contrast with the teaching of scientific medicine in medical schools where the actual average expense of teaching a student each year is more than three times what the student pays in tuition fees!

The low ideals of the leaders of this cult are shown in the report of Mr Justice Hodgins of Ontario issued a few years ago B J Palmer himself is quoted as having stated that bacteriology was the greatest of all gigantic farces ever invented for ignorance and incompetency and that 'the analysis of blood and urine is of no value In this same report other leaders of chiropractic deride also the study of materia medica and chemistry and state they have 'no earthly use for diagnosis They place themselves therefore in direct opposition to Pasteur, Koch Laveran Flexner and others whose discoveries during the last half century have revolutionized the practice of medicine and saved countless thousands of lives! No wonder Justice Hodgins concludes that he could

not bring himself "to the point of accepting, as part of the legalized medical provision for the sick, a system which denies the need of diagnosis, refers 95 per cent of disease to one and the same cause, and turns its back resolutely on all modern medical scientific methods as being founded on nothing and unworthy even to be discussed"

But the teaching in this particular school has further interesting tangents There is also "The Universal Chiropractors Association" with headquarters, evidently at this Palmer School of Chiropractic At least, B J Palmer and Frank W Elliott, the president and registrar of the Palmer School, are, respectively, the secretary, and the treasurer and business manager of the association The members of this association—made up largely of graduates of the Palmer School—are promised protection from, and assistance in cases of, prosecution for violating the law in practicing chiropractic According to the constitution, "The Association, except as herein otherwise provided, shall pay the fine and all costs in all prosecutions, civil or criminal, wherein any member of this class shall be charged in substance with having practiced medicine, surgery, osteopathy, or other method of healing or dealing with the sick or afflicted without a license, or other legal permission, provided such member is in good standing and shall have conformed to the Constitution, Bylaws and all Rules and Regulations of the Association"

The word 'class" in this paragraph refers to "active members' who are described as "all chiropractors of good moral character graduated from or holding certificates of attendance from such chiropractic institutions of learning as are recognized by this association and are practicing specific, pure and unadulterated chiropractics without the use of adjuncts, etc"

The constitution and by-laws of the association are printed in a pamphlet of twenty-four pages, including two pages of instructions as to "What to Do If Trouble Starts" Among the fifteen items in these instructions the following are interesting

11 Be conservative in your claims and be very careful that the enemy does not send any patient to you that they think will die on your hands or otherwise complicate matters Do not unless in a state or province where you are licensed undertake to handle any so called contagious diseases

13 Have as many friends as possible present at your trial Do not make any newspaper announcements without consulting your local attorney

15 If trouble has not really started but there are signs of it let us hear about it by letter

The graduates of this "school" are said to be practicing in Iowa—the institution's home state—in direct violation of the medical practice act and according to the above, they are being encouraged to violate the law in other states

From the foregoing statements it will be seen that the teaching conducted in schools of chiropractic is a menace to education and to public morals as well as to the science of medicine and to rational rules of public health The conclusions justified by the evidence submitted are as follows

(*a*) Leading chiropractors deride or disbelieve in such well known and proved sciences as chemistry, bacteriology and pathology Their teachings are not based on fact and are refuted by the accomplishments of the great minds in education, research science and medicine

(*b*) Their attitude toward these sciences shows their lack of sympathy for the first essentials in the prevention of epidemics and the regulation of public health

(*c*) They declare that education and the ability to make a diagnosis are not essential for the intelligent treatment of human diseases and injuries

(*d*) Their schools at most require only a common school education, a training insufficient to permit the student to undertake intelligently any but the most elementary course of study

(*e*) Their course of professional (?) instruction is too short to enable the student to obtain a training in the sciences necessary for the intelligent or safe practice of the healing art by any method

(*f*) The school teaches and encourages its students to advertise—which they are doing and using the same flagrant methods which have been employed by quacks since the Beginning of medicine

(*g*) Finally, the leaders of this cult openly urge their graduates to practice chiropractic in violation of the law, and have arranged through the Universal Chiropractors Association to aid and abet them in such outlawry

Book Notices

MIND AND ITS DISORDERS A Text Book for Students and Practitioners of Medicine By W H B Stoddart M D F R C P Lecturer on Mental Diseases to St Thomas Hospital Medical School Third edition Cloth Price $6 net Pp 580 with illustrations Philadelphia P Blakiston s Son & Co 1919

Complete conversion to the Freudian theory is the outstanding feature of this volume, comprising a third edition of the author s work 'Mental disease can only be understood by studying the psychology of the unconscious mind of patients, physical manifestation of a functional disorder must be regarded as secondary, not as primary" as the author taught in the earlier editions Dr Stoddart has joined men who, taking a powerful and dominating instinct, built a system around it, reducing all abnormal psychic reactions to it, just as Boris Sidis sought in fear the cause of all pathologic mental processes The fault with the theories of Freud and Sidis is that only the instincts of reproduction and fear are considered There are naturally others aside from these two that play an important part in the development of psychoses and neuroses Psychanalysis then becomes the paramount remedy The author is satisfied that psychanalysis reduces the pulse rate of exophthalmic goiter to normal in from four to six weeks and that the other symptoms are gradually ameliorated in a few months It is natural, then, that a psychoneurosis also 'psychogenetic epilepsy," can be cured only by discovering 'the unconscious strivings which have given rise to the disease, and in so doing to reveal them to the patient" The classification in this edition, while remodeled, still follows that of Kraepelin In the dementia praecox group "provisionally regarded as a psychosis a chapter is added on paraphrenia, a name applied by Kraepelin to a group of delusional cases formerly classed under the dementia paranoides or sometimes paranoia The average age of onset of paraphrenia is later than that of dementia paranoides, usually during the fourth decade Hallucinations developed much later in the course of this disease than in dementia paranoides and there is not the deterioration of personality to justify the appellation dementia In the pathology of manic depressive insanity, the author's theory of intraneuronic intoxication is ingenious, if not convincing The sections on normal psychology (Part 1) and the psychology of the insane (Part 2) are well written and up to date Dr Stoddart has contributed for years to the clinical research into the nature of nervous phenomena associated with mental disorders The outstanding feature of Part 3 (mental diseases) is the detailed description of the different forms of mental reactions especially is this true of the organic group dementia paralytica and others Dr Stoddart s work justifies a careful reading, especially by beginners in the field of psychiatry

LABORATORY MANUAL OF ORGANIC CHEMISTRY By Harry L Fisher Ph D Instructor in Organic Chemistry Columbia University Cloth Price $2 25 Pp 331 New York John Wiley & Sons 1920

Until recently American students in elementary organic chemistry were dependent mainly on foreign manuals for laboratory guidance At this time however it is gratifying to note that notwithstanding the extra burdens of the last three years, two excellent laboratory manuals have been written by American chemists The most recent book, that of Dr Fisher (the other manual was written by Dr Lauder W Jones), follows much the same general outline of subjects as that of its foreign predecessors, it excels though in the thorough manner in which the experiments are detailed One feature that commends the book is the author s insistence on neatness, the vital importance of which should be forcibly brought home to more laboratory workers chemical and medical The author realizes that the place to instil such

habits is the college laboratory In the preface, it is stated (in large type) "It is important that you know what you are doing when you are doing it" Of course, this statement has a double meaning, that is, the instructor must be so well informed with his subject that the student may not be misguided, the present day system of student assistants is often conducive to slipshod explanations The questions at the end of each experiment are well thought out and should serve admirably in keeping both the instructor and the student familiar with organic chemical literature in general The book is a worth while American contribution for those who are interested in the teaching of organic chemistry

SHELL SHOCK AND OTHER NEUROPSYCHIATRIC PROBLEMS Presented in Five Hundred and Eighty Nine Case Histories from the War Literature 1914 1918 By F E Southard M D Sc D Bibliography by Norman Fenton, S B A M Sergeant Medical Corps U S Army and an introduction by Charles K Mills, M D LL D Emeritus Professor of Neurology University of Pennsylvania Cloth Price $10 Pp 982 with illustrations Boston W M Leonard 1919

This is a rather unusual and, at first sight, somewhat bewildering book Possibly these qualities may be in part due to its genesis, as explained by the author It started out to be a supplemental aid in a course of instruction and turned out to be a comprehensive "case-history book on the neuropsychiatry of the war" After evolution to this dignity, an epicrisis of seventy-two pages was superadded so that as fully developed, it constitutes a short clinical history and digest of the neuropsychiatry of the greatest war of history In his introduction, which is a worthy review of the book Dr Mills says "The object of this book is to present both the data and the principles involved in certain neuropsychiatric problems of the war" These are presented in a wealth of detail through an extraordinary series of case records (589 in all) drawn from current medical literature during the first three years of the conflict There are indeed very few phases of war neuroses and psychoses not illustrated in this volume

A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY By Elbert V Rockwood M D Ph D Professor of Chemistry and Toxicology University of Iowa Fourth edition Cloth Price $2 net Pp 316 with 21 illustrations Philadelphia F A Davis Company 1919

The field of physiologic chemistry is enlarging so steadily, through extensive researches that frequent editions of textbooks are necessary in order to keep pace with the rapid advancement In this edition of Dr Rockwood's manual may be found practically all the modern methods used today in clinical analysis including even the very recent contributions on blood analysis The book will commend itself to physicians who desire to know the modus operandi of laboratory findings, the chemical and medical phases are interwoven carefully As a guide for the student, Dr Rockwood has combined in a most happy way the necessary academic fundamentals of biochemical work with the practical applications The clinician or laboratory technician who desires a compact, not burdensome work will find this book a worthy addition to his library

MANUAL OF DISEASES OF CHILDREN By James Burnet M A M D M R C P Physician for Diseases of Infancy and Childhood to and Physician in Charge of the Child Welfare Clinic at the Marshall Street Dispensary Edinburgh Second edition Cloth Price $3 Pp 416 New York William Wood & Co 1919

This small volume covers the whole field of pediatrics for practically every subject is discussed Of course, in a book of this size one cannot expect to get a complete idea of any subject. The most important symptoms are touched on, frequently in a cursory manner The chapters on infant feeding are written from a standpoint distinctly British and cannot be said to be sufficiently detailed so that one having little knowledge of the subject could derive much benefit from them The preface states that the work is meant for the busy general practitioner but it is hard to see how such a short treatment of the various subjects can be of benefit to the man who has to meet individual cases and account for the various symptoms which present themselves The book has the merit of presenting the author's own view, and as such is to be commended

Medicolegal

Discoveries as to Roentgenogram Not Ground for New Trial

(Caldwell Hoskins et al (Ore) 186 Pac R 50)

The Supreme Court of Oregon in affirming a judgment in favor of the plaintiff for damages for personal injuries, says that the defendants filed a motion for a new trial based on affidavits to the effect that a few minutes before the jury returned the verdict the attorneys for the defendants learned of a rumor that the plaintiff had caused a roentgenogram to be taken, that there was no opportunity to verify the rumor until after the verdict was received, that afterward the defendants ascertained that the plaintiff had gone to a roentgenologist who took a roentgenogram of her spinal column and ribs which showed that there had never been any injury to the spine and ribs, and that the roentgenologist informed her that she had not sustained any injury to her spine or ribs The defendants contended that a new trial should have been granted because (1) the plaintiff was guilty of misconduct in suppressing and concealing the roentgenogram, and because (2) the roentgenoscopy constituted newly discovered evidence which the defendants could not with reasonable diligence have discovered and produced at the trial But the evidence about the rib and spine affected the amount of the verdict rather than the right to a verdict The roentgenoscopy was not made until six months after the date of the injury The roentgenogram was not made a part of the record or exhibited to the trial judge There was no affidavit by the roentgenologist notwithstanding the fact that the plaintiff testified as a witness in her own behalf, and by doing so consented that the physician might testify as a witness While the court does not intend to decide whether the trial judge could have compelled the plaintiff to submit to an examination on the application of the defendants yet the court may with propriety note the fact that the plaintiff was not requested to permit physicians chosen by the defendants to examine her condition, and so far as the question of her injury was concerned the defendants were apparently willing to rest their whole case on the testimony of one physician and of one of the nurses at the hospital The plaintiff was a witness in her own behalf and she was cross-examined The defendants had ample opportunity to inquire as to whether or not any other physician had examined her and whether a roentgenogram had been taken and yet no such inquiries were made In view of the fact that the defendants did not take full advantage of the opportunities offered by cross-examination and in view of the other facts shown by the record the court does not think it would be justified in reversing the trial court and holding that he should have allowed a new trial on the ground of newly discovered evidence Nor does the court think that it could fairly be said that the plaintiff was guilty of suppressing evidence She knew whether she suffered any pain and she also knew where the seat of the pain was So overwhelming was the evidence that it might be said to have conclusively established that she suffered pain in the side The physician who examined her on the evening of the accident stated that he did not discover any broken rib or twisted spine The physician who called on her five days afterward and from that time on acted as her attending physician testified that her rib was broken and that her spine was twisted The roentgenogram was not taken until six months after the accident and for aught that appeared in the record the broken rib if there was one might have completely united leaving no evidence of a former break The court was not advised as to whether medical men would say that a break either sometimes or always leaves evidence of the break which a roentgenogram will invariably picture, nor does it know how serious the break must be in order to leave permanent evidence of the fracture If the plaintiff's rib was broken it might be that it was a slight break and no evidence of the fracture remained when the roentgenogram was taken The plaintiff was not bound to believe the opinion

of the physician who took the roentgenogram six months after the accident, but, knowing that she actually suffered pain, and having been told by her attending physician that her rib was in truth broken she had a right to believe, as she undoubtedly did that her rib was broken, and she was under no obligation to call the roentgenologist as a witness merely because his opinion, based on an examination made six months after the injury, differed from the opinion of her attending physician

Death from Influenza Not Increased Risk of Military Service

(Myli American Life Insurance Co (N D) 175 N W R 641
Benham American Central Life Insurance Co (Ark) 217 S W R 467)

The Supreme Court of North Dakota in affirming a judgment in favor of the plaintiff in the Myli case which was brought to recover the face of a life insurance policy says that it appeared that the insured had enlisted in the United States navy during the recent war and had been assigned to Dunwoody Institute in Minneapolis for instruction and training While so assigned he was taken ill with the influenza and died in the city hospital The insurance company denied liability for more than the amount of the premiums previously paid on the ground that the insured had not obtained a permit under the clause of the policy which provided that if the death of the insured should occur while engaged in military or naval service in time of war without previously having obtained from the company a permit therefor, the company's liability should be limited to the cash premiums paid But the court holds that in view of the other provisions of the policy with respect to double indemnity for accidental death and disability benefits the foregoing provision did not exempt from liability for the face of the policy when the death of the insured was not occasioned by extra hazard incident to military or naval service On the question of the proof that the insured came to his death while subject to the hazard of naval service it was clear that such was not the case He was in an inland city and not subject to any risks not common to civilians with whom he was constantly associated

In the Benham case, the Supreme Court of Arkansas takes a somewhat similar view and reverses a judgment that was rendered on a verdict that was directed in favor of the plaintiff for only the reserve accumulated under the policy The court says that the insured in this case enlisted in the aviation branch of the military service of the United States After being on duty for a while at an aviation camp in Texas, he was sent to Cornell University for special training and later was ordered to report at Camp Dick, Texas but en route to Camp Dick he contracted influenza and on his arrival at Dallas was transferred to a hospital where he died The record in the case showed that the influenza was prevalent throughout the United States, and that soldiers and civilians alike contracted it and died from it and the court does not think that the death of the insured was in any sense caused by performing any military service or in consequence of being engaged in military service The words in the restricted clause of the insurance policy under consideration in this case meant something more than death to the insured during the period of time he was in military service The word 'engaged' denotes action It means to take part in So here the words death while engaged in military service in time of war meant death while doing performing or taking part in some military service in time of war, in other words it must be death caused by performing some duty in the military service That is to say in order to exempt the company from liability the death must have been caused while the insured was doing something connected with the military service, in contradistinction to death while in the service due to causes entirely or wholly unconnected with such service By the use of the word 'engaged it must have been intended that some activity in the service should have caused the death in contradistinction to merely a period of time while the insured was in the service

Society Proceedings

COMING MEETINGS

Montana State Medical Association Helena July 14-15

AMERICAN ASSOCIATION OF ANESTHETISTS

(Concluded on page 1540)

Anesthesia Problem in Goiter Surgery

DR ANDRE CROTTI Columbus Ohio Both local and general anesthesia are methods of choice in goiter surgery When expertly used and the dangers of general anesthesia are obviated and the psychic shock of local anesthesia is controlled the choice between the two methods of anesthesia seems to be a matter of personal cohesion In using general anesthetics for goiter surgery it is vital to prevent their alarming reflex reactions during induction, as well as any tendency to respiratory embarrassment or cardiac collapse vomiting and acidosis The use of preliminary narcotics and concomitant oxygenation is advisable Atropin to prevent cardiac collapse would be invaluable if it were not too toxic in effective dosage Too often failures and misfortunes are charged to the anesthetic when the fault lies in the judgment of the surgeon and an injudiciously performed operation For the time being the most popular anesthetic for thyroid surgery is ether I have operated in more than 1 000 cases of goiter under ether I no longer resort to anociation While nitrous oxid-oxygen anesthesia may be safe and efficient in some clinics I have found it too fraught with abrupt complications that are difficult for any but the most expert anesthetists to handle or avoid Ether has a greater leeway for controlling any alarming states that may arise during its administration

Anesthesia Problem in Goiter Surgery from the Surgeon's Point of View

DR VILRAY P BLAIR, St Louis The temperament and technic of the operator have in a general way a much stronger bearing on the proper choice of the anesthetic than the chemical properties or physiologic reactions that are peculiar to any particular agent The similarity of results obtained by different men who with large experience, have concentrated on a certain method of anesthesia, does not mean that there can be no elements in the particular case pertaining to the choice of the anesthetic, but rather that the proper correlation of the anesthetic to the technic is of vastly more importance than the particular anesthetic agent employed Studies in metabolism show that the patients who do badly react in this manner because of the degree of thyrotoxicosis rather than because of any errors in anesthesia management Toxicity is in proportion to the mass of the gland Those who employ a general anesthetic with the best results are the men who produce the least psychic shock, operate quickly with the least traumatism and remove large amounts of the toxic gland Under ether the increased respiration of the excitement stage, followed by acapnia will be more likely to cause paralysis of the respiratory center in those cases in which the disease has progressed to secondary damage to the nervous system Ether has been shown to favor a postoperative acetonemia and a rapid exhaustion of the glycogen reserve of the body through stimulation of the metabolic rate My own experience causes me to use local anesthesia for goiter patients who are really sick either from intoxication or degeneration in essential organs, but for simple cases and milder intoxications I use ether and in tracheal collapse, rarely present I use intratracheal ether insufflation

Value of Anociation in Goiter Operations

DR W E LOWER Cleveland The vital test of any surgical method is found not in its effect on the moderate risk or even in its effect on mortality rate alone but rather in the mortality rate plus the postoperative morbidity Anociation implies an all-inclusive operative technic adapted to the individual case whereby the noxious influences—psychic and

traumatic—which inevitably attend any surgical procedure are minimized or eliminated So sensitive is the thyrotoxic patient that the anesthetist during the operation, will often be able to note when the knife has passed beyond the blocked zone by the altered pulse and respiration, which in the unconscious state in this disease respond to contact with a like exaggeration to that noted in the conscious patient In this operation, as in almost no other, therefore, the anesthetist and the operating surgeon must work in accord It follows that the ideal anesthetist in this operation is one whose specific training as an anesthetist is combined with sufficient knowledge of operative technic to assure the recognition of the approach to shock-producing areas in the course of the operation In no other class of cases is the value of nitrous oxid-oxygen, as compared with ether more clearly demonstrated The absence of nausea, the easy and quickly attained unconsciousness prevent or minimize the dread of the anesthetic which in the multiple stage operations in particular might become a dangerous factor Moreover, with nitrous oxid-oxygen, the degree of unconsciousness may be graded to suit the condition of the patient at every stage in the operation

Clinical Observations on Nitrous Oxid-Oxygen Anesthesias in Hyperthyroidism

DR LINCOLN F SISE, Boston In the clinic of Dr Frank H Lahey, patients get rest in bed for a number of days, depending on their toxicity Two hours before operation they receive a hypodermic injection of ¼ grain of morphin and 1/200 grain of scopolamin and this is repeated one hour before operation After the gas oxygen is started the head is well extended Procain is used in the skin and other sensitive structures, and accurate gentle surgery with careful control of bleeding, is employed throughout Almost without exception these patients go under anesthesia in a minute without disturbance of any kind Pushing the anesthetic during induction may cause a fall in the rate of the pulse and respiration Toxic cases seem to require a higher percentage of oxygen to maintain their color than do nontoxic cases, as the extra oxygen is needed to maintain their abnormally rapid metabolic activities Ordinary surgical shock is not present in goiter surgery except in cases in which the trachea is involved and respiration obstructed Respiration during the operative procedure runs about normal Under local anesthesia alone the pulse rate may be increased by 50 beats, but following the administration of nitrous oxid-oxygen there is a decisive drop The highest point reached by the pulse soon after the operation may be taken as an indication of the severity of the reaction to the anesthetic and surgical procedure This point is practically always reached within half an hour after the patient leaves the operating room It is also the best standard available by which to measure the intensity of the thyrotoxic storm

Ether-Oil Colonic Anesthesia in Goiter Surgery

DR. WALTER LATHROP Hazelton Pa Ether-oil colonic anesthesia is most decidedly in favor of the colonic method of anesthesia originated by Gwathmey The method is especially efficacious in thyrotoxic patients Ether-oil colonic anesthesia is contraindicated in patients having colitis hemorrhoids or other rectal irritations We have had but two cases of postoperative irritation or looseness of the bowels in all our work The after-effects are equal to or better than those in the inhalation cases, and postoperative vomiting is reduced to a minimum while the effect of the anesthesia is such that most patients rest very quietly for some hours after operation and complain of little or no pain aside from the throat irritation that would follow any method after removal of the thyroid Occasionally colonic anesthesia needs to be supplemented by a few whiffs of chloroform Also the anesthetist must see to it that respiration remains free and that some of the anesthetic mixture is withdrawn should the patient exhibit signs of going too deeply under the anesthesia The safety limit of this method of anesthesia is extended by the gradual absorption of ether by the colon and its rapid elimination by the lungs The principal factor of safety is the wide margin between the dosage required for surgical narcosis and that which produces toxemia Colonic anesthesia may be administered to the patient in bed and the operation performed without the patient's knowledge, especially in those instances in which the surgeon and anesthetist are dealing with high-strung nervous patients, with increased blood pressure and possible myocardial degeneration

Thyroidectomy Under Local Anesthesia

DR CARROLL W ALLEN, New Orleans I prefer to use local anesthesia in all cases without exception If the patient can be operated on at all the procedure can be done more safely under local than under general anesthesia This also holds good for polar ligations in bad risks as a preliminary step to the more radical operation Regional anesthesia is very limited in its application to goiter surgery and has no special advantages A thorough knowledge of the neuro-anatomy of the parts involved is essential for success in using local anesthesia

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AMERICAN GYNECOLOGICAL SOCIETY

Forty Fifth Annual Meeting held at Chicago May 21 26 1920

The President, DR ROBERT L DICKINSON New York, in the Chair

Analgesia and Anesthesia in Labor

DR EDWARD P DAVIS Philadelphia The best quality of ether, skilfully administered is successful in the majority of cases of spontaneous labor during the second stage If given at the height of the pain and quickly removed as soon as the pain subsides it stimulates and does not retard labor The moment when expulsion occurs a few deep inhalations without air will render the patient insensible to pain although capable of comprehending sensations of feeling, of hearing or often of sight The mother rouses easily after delivery, and requires no anesthesia while the placenta is separating For the insertion of stitches immediately after labor ether properly administered with oxygen is comparatively safe and efficient We have seen no evidence that such use during the stage of expulsion injures the fetus

Induction of Labor Use of Pituitary Extract

DR BENJAMIN P WATSON, Toronto Ont Pituitary extract is a most valuable agent for accelerating the second stage of labor when delay is due to feeble uterine contraction I have used it extensively for the induction of labor and during all stages of labor and have never had any bad results The method used is to begin with a dose of 0 5 to 1 cc administered intramuscularly with a long needle In most cases uterine contractions commence in about ten minutes and increase in severity during the next twenty minutes At the end of this time the second injection of 0 5 cc is given If after a time the contractions tend to weaken or to come at longer intervals, the dose is repeated As many as six or eight doses may thus be given at intervals of about half an hour The important point is to administer a further dose before the effects of the previous one have entirely passed off The effects from a single dose appear to last only for about half an hour and there is no cumulative effect When the cervix has begun to open and the membranes to bulge into it the uterine contractions will continue without the further administration of the drug The failures I had in the beginning were the result of not pushing the dosage far enough It is perfectly safe to give eight or ten 0 5 cc doses at half-hour intervals

Induction of Labor at Term

DR CHARLES B REED, Chicago Labor can be inaugurated by quinin and pituitary extract by castor oil and quinin, by the modified de Ribes bag or by both The castor oil acts in about two cases out of five and most reliably when the patient is a little bit past the calculated date The Voorhees bag is the most dependable

Prophylactic Forceps Operation

DR JOSEPH B DE LEE, Chicago The prophylactic forceps operation is the routine delivery of the child in head presenta-

tion when the head has come to rest on the pelvic floor, and the early removal of the placenta Primiparous labors, and those in which the conditions of the soft parts approximate a first labor, are treated by this method which really comprises more than the actual delivery of the child It is a rounded technic for the conduct of the whole labor, with the defined purpose of relieving pain, supplementing and anticipating the efforts of nature, reducing the hemorrhage, and preventing and repairing the damage

Value of Wassermann Reaction in Obstetrics

DR J WHITRIDGE WILLIAMS, Baltimore Among 4,000 parturient women a positive Wasserman reaction was noted in 421 Of 302 children born dead or who died during the two weeks following delivery, death was proved to be due to syphilis in 102, while a positive maternal Wassermann reaction does not necessarily mean the birth of a syphilitic child, a negative reaction does not necessarily imply the absence of syphilis

Extraperitoneal Cesarean Section

DR JOHN A MCGLINN, Philadelphia The Beck operation, with thorough protection of the peritoneal cavity and perfect peritonealization of the uterine incision, is superior to the transperitoneal operation as a routine procedure While theoretically it is not as efficient as the extraperitoneal method, practically on account of the many disadvantages of the latter, it is the better operation

Artificial Impregnation

DR ROBERT L DICKINSON Brooklyn Tubal patency must be established by simple instillation of sterile fluid in the knee-chest posture Semen does not run true to form a single test being of little value Immediately before each injection, the microscope must be used Injection is made first, until uterine then tubal discomfort or mild colic shows the lateral reservoirs filled Pregnancy followed five times in three patients Repeated injections for several months should be specified There were no troublesome painful reactions, except in one instance in thirty-two injections

Neglected Form of Cervical Endometritis

DR HENRY T BYFORD, Chicago As a result of acute cervical endometritis, a permanent exudate is sometimes left about the internal os uteri, where there is a greater thickness of the mucosa This constriction ring not only produces the characteristics of stenosis in many cases but also gives rise to the ordinary symptoms that are usually attributed to endometritis The symptoms vary greatly in different patients depending partly on the interference with the patency of the lumen, the chronicity and the associated pelvic conditions, and partly on the patient's general resisting powers and nervous habits The diagnosis is made by means of the sound which detects a tender area at the internal os and which causes more or less bleeding In the more chronic cases, firm pressure exerted by a dilating sound produces a slight discharge of inspissated mucus, which adheres to the sound The treatment calls for gradual progressive dilatation with round dilators under the strictest aseptic and antiseptic precautions and later stimulating applications of iodized phenol The occasional failure of an Emmet trachelorrhaphy to cure the symptoms is laid to a persistence of such an exudate at the internal os

Treatment of Suppurating Wounds Following Abdominal Section

DR. THOMAS J WATKINS Chicago No sutures are removed on account of suppuration, except when they cut deeply into the tissues and no drains are inserted No probing is permitted Moist boric acid dressings are placed over the wound as soon as signs of suppuration appear and are continuously applied until the amount of drainage becomes scant and until excessive redness disappears The moist dressings are used to keep the wound secretions from desiccating and to promote drainage A large amount of drainage will take place through very small openings when thus treated, the drainage will be efficient and the suppurating surfaces, by virtue of atmospheric and intra-abdominal pressure will keep in relative apposition The wounds heal quickly, the treatment is painless, the patient is not unnecessarily disturbed mentally and the ultimate strength of the abdominal wall is seldom injured by the suppuration When the discharge ceases, no open wound remains to heal by granulation Antiseptic solutions are not employed, as they injure the tissues more than they harm the bacteria

Hemorrhages Into Pelvic Cavity Other Than Those of Ectopic Pregnancy

DR RICHARD R. SMITH, Grand Rapids Mich The most frequent source of such hemorrhage is the ovary a ruptured graafian follicle or corpus luteum, hematoma ovarii and ovarian tumors (cystic or solid), although the tube may on rare occasions give rise to hemorrhage A tube involved in the twisted pedicle of an appendage is a good illustration of such hemorrhages Intraperitoneal hemorrhages may occur from fibroid tumors

The Importance of a Follow-Up System

DR GEORGE W KOSMAK New York In view of the liability to injuries resulting in invalidism remaining unrecognized in the usual postpartum examination a discharge of the patient should not be made for at least three months after the birth of the child During this interval at least two or three examinations of the patient should be made Of forty eight American maternity hospitals thirty-six maintain some sort of follow-up system but in the majority of the latter the patients return only if abnormalities develop A regularly organized postpartum clinic should be part of the equipment of every maternity hospital and in connection with it an organization of social service workers or follow-up nurses to visit the patients in their homes is essential The necessity of more prolonged postpartum observation should be included in every scheme of hospital standardization and the shortcomings of institutional work in this field applies with equal force to private patients The advisability of some form of maternity insurance may do a great deal to obviate some of the difficulties connected with the scheme of more prolonged postpartum care of obstetric patients

Operation or Radium for Operable Cancer of Cervix

DR WILLIAM P GRAVES Boston Personal experience with radium in cancer of the cervix has not justified its use in operable cases as a substitute for radical operation Success depends largely on equipment and method of application not possessed by the users of moderate quantities of radium Operation is the treatment by choice by those to whom the highly developed radium therapy is not available

Radium Treatment of Cervical Cancer

DR FREDERICK J TAUSSIG St Louis Radium treatment of uterine cancer should be kept in the hands of the gynecologist rather than the roentgenologist but such a gynecologist should seek preliminary training in the use of radium and must have continued opportunity for observation and treatment of cancer cases in order to reduce mistakes to a minimum

Operation is to be preferred in the case of all operable patients under 35 years of age and in the early operable cases beyond this age Radium is to be recommended wherever obesity or lung heart or kidney lesions make operation difficult or dangerous and in advanced operable borderline and inoperable cases but not in the advanced inoperable group with cachexia It is better to treat the advanced inoperable cases with acetone since radium increases the tendency to fistulas and pain in most instances

A New Method of Covering Raw Surfaces on the Uterus

DR GEORGE GELLHORN St Louis The fundus is pulled backward and upward in the direction of the promontory The reflection of the bladder peritoneum on the cervix is incised transversely as in a hysterectomy and pushed off from the uterus The uterus is then tilted forward, and the bladder peritoneum is pulled over the uterus and stitched to the posterior aspect of the fundus, where an intact peritoneal surface presents itself *In small uteri the bladder*

peritoneum may be fastened as far back as the insertion of the sacro-uterine ligaments, if necessary The entire fundus with its denuded area is thus covered by peritoneum If an inverting stitch is used, even the catgut knots become invisible The newly formed covering consists only of the bladder peritoneum which, in many cases, is so thin and transparent that the raw uterine surface and even the volsella holes may be distinguished The method not only supplies the raw fundus with a new serous coat, but it also safeguards a normal position and mobility of the uterus, and the late results have remained most satisfactory It is, however, not to be relied on exclusively in a case of fixed retroflexion I have never observed an instance of vesical disturbance other than those that may follow any laparotomy

Lutein Cysts Accompanying Hydatidiform Mole

DR W A COVENTRY, Duluth, Minn In one case the ovarian tumors appeared with the mole (in fact, somewhat clouding the history of mole), and in the other case the tumor seemed to arise and started to grow rapidly after the mole had been removed These multiple lutein cysts are different from those normally appearing during pregnancy They accompany only the formation of chorio-epithelioma and mole, and are probably not to be found in any associated condition

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Review of Tuberculosis, Baltimore

May 1920 **4**, No 3

Tuberculosis in Guinea Pig after Subcutaneous Infection Tracheobronchial Lymph Nodes A K Krause Baltimore —p 135
Factors that Influence Development of Tubercle in Lymph Nodes of Guinea Pig A K Krause, Baltimore —p 193
*Vincent's Spirochete and Hemorrhage in Pulmonary Tuberculosis A N Sinclair Honolulu —p 201

Tuberculosis After Subcutaneous Infection—After subcutaneous (right groin) infection of guinea-pigs with massive doses of tubercle bacilli the bacilli are carried centralward by the lymphatic stream and thence into the blood and throughout the body with great facility and rapidity Krause is of the opinion that for a time after pulmonary infection (infection, not lesion) is first established, most bacilli are expelled from the lung (of the guinea-pig) by the lymphatics Many experiments made by Krause have shown this In the tuberculous guinea-pig gross lesion of the lung is not indispensable to the appearance of gross lesion in the tracheobronchial nodes Lesion in the latter very commonly exists without lesion in the lung The amount of involvement of the tracheobronchial nodes is directly related to the amount of tubercle that may be present anywhere in the body But, since under ordinary conditions the spleen is the most extensive depot of tubercle in the guinea-pig, the condition of the tracheobronchial nodes usually reflects that of the spleen

Tuberculosis of Lymph Node—In the guinea-pig, Krause says, the existence of tubercle in a lymph node is contingent on the occurrence of a lesion at a point peripheral to the node The progression or retrogression of tubercle in this animal's lymph nodes is largely dependent on the progression or retrogression of the peripheral foci

Spirochetes and Lung Hemorrhage—A rounded, definitely limited roentgen-ray shadow about the size of a small orange, was noted by Sinclair just to the right of and slightly below the level of the hilum in twenty-three cases complicated with hemorrhage and Vincent's spirochete and *B fusiformis* were present in the sputum in large numbers Of 410 sputum examination, 256 showed the presence of the spirochete while 182 were complicated with hemorrhage Of the 154 negative cases 56 were complicated with hemorrhage The corollary of this shows that of 238 cases with hemorrhage the spirochete was present in 182, and of the 172 cases without hemorrhage the spirochete was present in 74 If the series of cases under consideration is divided into those cases in which cavitation can be ruled out (incipent cases), and those cases in which there is a probable or evident active cavitation (advanced cases), there will be 205 incipient and 205 advanced cases Of the 205 incipient cases, 118 had hemorrhage, and in all but 13 the spirochete was demonstrable Also of the 56 cases in which the spirochete could be found, there was active cavitation in 43

Arkansas Medical Society Journal, Little Rock

May, 1920 **16** No 12

Focal Infections Their Relation to Some Pathologic Conditions of Organs of Special Sense L H Lanier Texarkana —p 223
Focal Infections W T McCurry, Little Rock —p 227

Boston Medical and Surgical Journal

June 1920 **182**, No 25

*Significance of Hematuria A L Chute Boston —p 623
Chronic Fatigue Diet Exercise and Other Factors in Treatment J Bryant Boston —p 629
*Infection of Knee Joint Treated by Early and Continuous Active Motion F B Lund Boston —p 631

Hematuria—A study of 100 cases of hematuria which probably represents pretty much the ordinary run of such cases Chute says, proves very definitely that hematuria is not a condition to be looked on lightly that in more than one half of the cases it is indicative of an extremely serious condition which is only remediable if recognized and treated early, that in only a small proportion of cases, more especially in the cases of bleeding nephritis, can it be said that it makes no real difference whether they are attacked early or not, that in these very cases, however, it is essential that they be investigated for the simple reason that in most instances without this investigation it is utterly impossible to distinguish them from cases of hypernephroma where an early diagnosis and early removal of the growth are essential if one is to accomplish anything in this class of tumors of the kidney Study of a considerable number of cases of hematuria compels Chute to conclude that the physician who told his patient that he might safely ignore his bleeding showed poor judgment medically, that although he was partially right this was due to good luck rather than to sound medical judgment

Active Motion in Infected Knee Joint.—A bullet located in the capsular ligament was the cause of the infection in Lund's case The joint was opened and a large amount of seropurulent fluid escaped The bullet was found and removed A rubber tissue drain was placed in the popliteal space and a dry sterile dressing applied Active motion was started the next day This was regularly continued daily, the temperature gradually going up until a collection of pus in the upper part of the popliteal incision was drained and a rubber tube put in Then a pus pocket above the upper end of the wound in the popliteal space was opened At this time the active motion was not as free as it had been on account of the swelling and tenderness in the popliteal space The patient was then put on the Carrel treatment under which the amount of pus gradually diminished The active motion was continued though not quite to the same extent as the first Lund is convinced that in this case active motion from the first gave an excellent result, although recovery was delayed by the complication of the abscess in the popliteal space

Bulletin Johns Hopkins Hospital, Baltimore

May 1920 **31** No 351

*Significance of Syphilis in Prenatal Care and in Causation of Fetal Death J W Williams Baltimore —p 141
*Transient and Paroxysmal Auricular Fibrillation V R Mason Boston —p 145
*Determination of Acidity of Gastric Contents A T Shohl Baltimore —p 152
*The Colorimetric Determination of Free Hydrochloric Acid in Gastric Contents A T Shohl and J H King Boston —p 158
Combined Acidity and Buffer Value of Gastric Contents A T Shohl and J H King Boston —p 162
Psychopharmacology D I Macht Boston —p 167
*Biologic Study of Hemolytic Streptococci from Throats of Patients Suffering from Scarlet Fever W P Bliss Boston —p 173

Syphilis as Cause of Death of Fetus—Williams' paper is based on the study of 302 fetal deaths occurring in 4 000 consecutive deliveries Of the 302 dead babies, 212 came to necropsy In the former are included not only those dying at the time of labor or during the two weeks immediately following it, but also those dying during pregnancy from the time of viability onward, 157 occurred at the time of labor or during the first two weeks of the puerperium and 145 were in premature children Syphilis was noted in 104 cases in eighty-nine of which the diagnosis was confirmed by necropsy with the demonstration of spirochetes in the fetal tissues, while in the remainder it was made from the presence of syphilitic lesions in the placenta, associated with a positive Wassermann on the part of the mother

Auricular Fibrillation—Eighteen cases are reported by Mason In about 7 per cent the arrhythmia was transient or paroxysmal Cardiac disease was a nearly constant finding In a few instances in which the only evidence of cardiac disease was an attack of auricular fibrillation it was necessary to assume that cardiac changes due to arteriosclerosis or hypertensive vascular disease were present

Acidity of Gastric Contents.—Shohl claims that the expression of gastric acidity in terms of p_H (hydrogen-ion concentration) brings out clearly the relation between acidity and peptic digestion

Colorimetric Determination of Free Hydrochloric Acid—A new colorimetric method is presented by Shohl and King which determines the amount of free hydrochloric acid in the gastric contents A simple color comparison shows both the amount and concentration of the acid The procedure is Take 2 c c of filtered or unfiltered gastric contents Add 2 drops of 0 2 per cent thymolsulphonephthalein Compare the color of the sample with standard solutions containing the same amount of the same indicator The result can be read directly in hydrochloric acid in 100 c c of gastric contents The method is accurate and applicable to clinical tests

Biology of Hemolytic Streptococci—In a study by Bliss of twenty-five strains of *S hemolyticus* isolated from the throats of patients with scarlet fever, twenty or 80 per cent, were agglutinated by four different antistreptococcic serums made with streptococci isolated from scarlet fever cases None of these strains were agglutinated by five antistreptococcic serums of nonscarlatinal origin (except in the few instances noted) But three of seventeen strains of nonscarlatinal origin were agglutinated by these three serums of scarlatinal origin and these three may have been either atypical scarlatinas or scarlatinal contacts Certain differences in cultural characteristics, particularly in the fermentation of carbohydrates, were noted

Canadian Medical Association Journal, Toronto

May 1920

Ontario Medical Association Reorganization J H Mullin—p 401
Union of Septic Compound Fractures W E Gallie—p 407
Wounds and Infections of Knee Joint A T Bazin—p 416
Cancer of Uterus Diagnosis G S Cameron—p 424
Causes of Death in Men who Died from Gunshot Wounds of Abdomen H E Clutterbuck—p 428
Certain Bacteriologic and Seriologic Aspects of Epidemic Influenza A H W Caulfeild and D T Fraser—p 436
*Early Diagnosis of Variola Conditions of the Blood and Spleen N B Gwyn—p 447

Diagnosis of Smallpox—Gwyn suggests that a normal or even low leukocyte count and an unusually firm large spleen may be found in the preeruptive stage of mild variola and that this fact may be of use in early diagnosis

Colorado Medicine, Denver

May 1920 **17**, No 5

Gastrostomy for Laryngeal Tuberculosis C J Lowen Denver—p 111
Case of Congenital Word Blindness C S Bluemel Denver—p 113
Case of Double Optic Neuritis Associated with Dental and Nasal Focal Infection G F Libby Denver—p 117
Ileus J L Mortimer Denver—p 119
Etiologic Factors and Treatment of Certain Types of Surgical Infections C E Tennant Denver—p 124
*Three Cases Presenting a Masto Ovarian Syndrome Relieved by Corpus Luteum J B Hartwell Colorado Springs Colo—p 128
Antituberculosis Activities in France C T Burnett Denver—p 132

Corpus Luteum in Pain in Breasts—In the three cases cited by Hartwell pain in the breasts was more or less constant, severe and aggravated by menstruation The use of corpus luteum for about one week gave complete and permanent relief from pain in each case.

Florida Medical Association Journal, St. Augustine and Jacksonville

May 1920 **6** No 11

Reproduction L DeBlocker Pensacola—p 202
Pruritis Ani J Holton Sarasota—p 205

Illinois Medical Journal, Oak Park, Ill.

May 1920 **37** No 5

Diagnosis of Ectopic Pregnancy H F Lewis Chicago—p 301
Postpartum Management E Cary Chicago—p 305
Mercurosal in Treatment of Syphilis L D Smith Chicago—p 308
Soldier and Tuberculosis C L Wheaton Chicago—p 310
Osteomyelitis of Traumatic Origin A B McQuillan East St Louis—p 313
Cystic Dilatation of the Vesical End of Ureter Report of Case F Kreissl and Wm H Gehl Chicago—p 315
Diseases of Thyroid and How to Attack Them E W Marquardt Elmhurst—p 320
Prostatectomy Its After Treatment D J Hayes Milwaukee Wis—p 325
Treatment of Fractures of Radius and Ulna at Middle Third C H Lemon Milwaukee Wis.—p 328
Sphenoid Sinus J A Cavanaugh Chicago—p 331
Pernicious Vomiting Plea for Mother P Gardner New Hampton Iowa—p 333

Journal of Biological Chemistry, Baltimore

April 1920 **41** No 4

*Digestibility of Chicken Skin E F Kohman and H A Shonle Indianapolis—p 469
*Effect of Sleep on Alkali Reserve of Plasma J B Collip Edmonton Canada—p 473
Utilization of α Methylglucoside by Aspergillus Niger A W Dox and G W Roark Ames Ga—p 479
Properties of Nucleotides from Yeast Nucleic Acid P A Levene New York—p 483
Rutin Flavone Pigment of Escholtzia California Cham C E Sando and H H Bartlett Ann Arbor Mich—p 495
*Formation of Acetone Bodies Following Ether Anesthesia and Their Relation to Plasma Bicarbonate J J Short New York—p 503
*Milk as a Source of Water Soluble Vitamin T B Osborne and L B Mendel New Haven Conn—p 515
*Effect of Intravenous Injections of Active Deposit of Radium on Metabolism in Dog R C Theis and H J Bagg New York—p 525
Determination of Refractivity of Hemoglobin in Solution F H Howard Williamstown—p 537
*Nutritive Factors in Plant Tissues IV Fat Soluble Vitamin T B Osborne and L B Mendel New Haven Conn—p 549
Studies of Acidosis XVI Titration of Organic Acids in Urine D D Van Slyke and W W Palmer Baltimore—p 567
*Determination of Fibrin Globulin and Albumin Nitrogen of Blood Plasma G E Cullen and D D Van Slyke New York—p 587
*Studies of Variations in Chemical Composition of Human Blood F S Hammett Philadelphia—p 599
Heat Coagulation of Milk H H Sommer and E B Hart Madison Wis—p 617
A New 0 1 N Calomel Electrode Design A E Koehler Madison Wis—p 619

Digestibility of Chicken Skin.—In experiments made by Kohman and Shonle in which over 65 1 to 67 5 per cent of the nitrogen of the diet was supplied by chicken skin especially prepared for eating there was as good utilization of nitrogen as when the same proportion of the nitrogen was supplied by meat eggs and milk The skin used for these experiments had 26 3 per cent fat and 3 03 per cent nitrogen To prepare it for eating it was rolled in balls and fried

Effect of Sleep on Alkali Reserve—Collip found that the alkali reserve of the blood plasma is either unaltered or depressed during sleep An actual increase in the C_H of the blood during sleep is indicated.

Formation of Acetone Bodies During Anesthesia—Acetone bodies were not formed promptly enough during ether anesthesia in cases reported by Short to account for the decreased plasma bicarbonate present in the blood plasma

Vitamin in Milk.—Attempting to duplicate the results of Hopkins Osborne and Mendel fed diets consisting of casein or edestin starch a salt mixture lard and other butter fat along with fresh milk offered in varying quantities In con-

tradiction to some of Hopkins' results they found, under the conditions of their investigation, that 2 c c of milk per day rarely sufficed to enable rats, on the diets mentioned, to make more than very slight gains in weight Many of the animals were barely maintained when such small quantities furnished the sole source of water-soluble vitamin Not until at least 16 c c of fresh milk per day were supplied along with the food mixture was anything approaching a normal rate of growth secured Even this amount sometimes failed

Effect of Radium on Metabolism.—Solutions of sodium chlorid which contained active deposit from radium emanation were used by Theis and Bagg The injection was followed by an increased output of nitrogen, reaching the maximum figure on the second day after treatment The absolute as well as the relative amount of total nitrogen excreted as ammonia nitrogen was decidedly increased The effect seems to be cumulative

Nutritive Factors in Plant Tissue.—According to Osborne and Mendel, the newer studies indicating the richness of many types of plant tissues in those nutritive properties termed vitamins, place the dietary importance of the green vegetables in an entirely new light It emphasizes their use to supplement the refined foods of the modern food industry which furnish products rich in proteins, fats and carbohydrates but in many cases comparatively deficient in the vitamins The fats cited in the present investigation along with others recently published serve as an added reminder that the fat-soluble vitamin need not be sought solely in foods known to be rich in fats

Studies of Acidosis.—Methods are described by Cullen and Van Slyke for separation of the fibrin, globulin, and albumin of blood plasma in such a manner that they may be determined by the Kjeldahl method

Nitrogenous Constituents of Human Blood.—Hammett's studies of the chemical composition of human blood indicate that while the total nitrogen, nonprotein nitrogenous constituents, and the sugar in the blood vary in the same person from week to week there is a tendency for the level of these variations to be characteristically individual The sum of the average deviations of the constituents for any given individual may be an index of the metabolic stability of that individual

Journal of Immunology, Baltimore

March 1920 **5**, No 2

*Natural Antihuman Hemolysins and Hemagglutinins in Horse Serum in Relation to Serum Therapy J A Kolmer and M Matsumoto Philadelphia—p 75
*Attempt to Produce Specific Immune Agglutinins and Hemolysins for Four Groups of Human Erythrocytes J A Kolmer and M F Trist Philadelphia—p 89
*Comparative Study of Methods for Preparation of Typhoid Agglutinogens J E Sands Philadelphia—p 97
*Study of Different Methods for Preparation of B Typhosus Antigen M Matsumoto Philadelphia—p 111
*Experimental Study of Effect of Autogenous B Coli Vaccines on Intestinal Colon Bacilli of Dogs J C Torrey and A H Rahe New York—p 133
Experimental Study of Sensitized Cholera Antigen Y Miura Tokyo—p 145
Dropping Bottle as an Aid in Macroscopic Slide Agglutination C Krumwiede New York—p 155
*Complement Fixation Test for Tuberculosis H O von Wedel—p 159

Antihuman Hemolysins and Hemagglutinins.—While practically all horse serums contain agglutinins for human erythrocytes, Kolmer and Matsumoto believe that it is highly probable that the intravenous injection of preserved horse serum does not introduce sufficient agglutinin and hemolysin for human erythrocytes to produce ill effects referable to intravascular agglutination and hemolysis, this is particularly true if the serum is diluted and injected slowly

Immune Agglutinins and Hemolysins for Erythrocytes.—The immunization of rabbits with human corpuscles belonging to Groups I, II III and IV does not result in the production of specific agglutinins and hemolysins for the corpuscles of the group employed in immunization, but Kolmer and Trist found that these serums frequently show slightly more agglutinin and hemolysin for the corpuscles of the group used in immunization than for the corpuscles of the remaining groups For the grouping of human erythrocytes it does not appear possible to prepare specific immune serums, human serums containing iso-agglutinins and hemolysins must be used and these are best preserved in a fluid state at or near the freezing point

Typhoid Agglutinogens.—A comparative study of agglutinogens prepared from a single strain of typhoid bacilli which had been used for agglutination tests for several years, was made by Sands An agglutinogen is best prepared by cultivating on solid medium for forty-eight hours, removing the growths with from 0.85 to 1 per cent chemically pure sodium chlorid in distilled water, shaking with beads until a perfectly homogenous emulsion is secured, diluting with saline solution to proper density (about 2,000,000,000 per cubic centimeter), and adding neutral liquor formaldehydi to 1 per cent

Preparation of Typhoid Antigen.—The general result of Matsumoto's study and a review of investigations by others indicate that the similar bacterial antigens in which is employed the whole micro-organism either living or dead in physiologic sodium chlorid solution or in culture broth, are superior to filtrates and constitute the antigens of choice for the conduct of complement fixation tests in bacterial infections

Effect of B Coli Vaccines on Intestinal Colon Bacillus.—In the case of a number of dogs Torrey and Rahe found it possible to effect the temporary suppression of a certain variety of *B coli* normal to the intestinal tract through inoculations with a specific vaccine Autogenous vaccines are apparently necessary for marked results and the dosage must be large Cultural results indicating a decrease in numbers of the type of *B coli* in question were associated with a coincident rise of specific antibody in the blood A uniform diet must be maintained, otherwise the effect of the vaccine will be obscured

Tuberculosis Complement Fixation Test.—The results of 6,128 complement fixation tests made by von Wedel on 1,207 serums from 1,000 patients point to the fact that this is not a 100 per cent test for the diagnosis of tuberculosis A considerable percentage of serums from incipient and far advanced cases apparently contain insufficient antibodies to fix complement, no matter what system or what antigen is used for the test This fact, therefore, precludes the probability of a 100 per cent test based on complement binding antibodies in the patient's serum About 70 per cent positive results appears to be the average finding, with all types of unselected active tuberculous cases, for many thousands of complement fixation tests made by many serologists, using tubercle bacillus suspensions or tuberculins as antigens The reactions are weakest when the patient exhibits few, if any, symptoms of tuberculosis, while they are most definite and strongest in the incipient and moderately advanced cases exhibiting marked symptoms The results are therefore more confirmatory than actually diagnotic in the largest percentage of cases However, when used intelligently, along with the clinical history, the results justify its more extended use

Laryngoscope, St Louis

April 1920 **30** No 4

1919—Index Medicus and Digest of Oto Laryngology

Medical Record, New York

June 5 1920 **97**, No 23

Cure of Cancer L D Bulkley New York—p 941
Diet and Health Amount and Kind of Food Required J Aulde, Philadelphia—p 947
Psychoanalysis H Laveson New York—p 952
Mycotic Otitis C J Koenig Paris—p 956
Physics of Percussion A Abrams San Francisco—p 958
Removal of Vertebra of Chicken from Esophagus J E Sheehan New York—p 959

June 12 1920 **97**, No 24

*Retrograde Stretching in Treatment of Impermeable Cardiospasm M Einhorn New York—p 983
*Anesthesia Problem in Lung Surgery J T Gwathmey New York—p 987
Case of Mixed Neurosis with Some Paraphrenic Features M K Isham New York—p 990

Epidemic Encephalitis (Miscalled Lethargic) T A Williams Washington D C—p 994
Osteomalacia Is It a Rare or Rather Common Disease W H Dieffenbach New York—p 995
Chronic Pulmonary Conditions Simulating 'Advanced Tuberculosis W Narins New York—p 997
In What Way Do Focal Infections Cause Systematic Disease T J Ryan New York—p 999
Subperitoneal Enucleation of Uterus Report of Five Cases H Crutcher, Joliet Ill—p 1001

June 19 1920 **97,** No 25

Some Principles Seldom Recognized in Treatment of Syphilis and Syphilitics W W Graves St Louis—p 1025
Significance of Diastolic Blood Pressure L F MacKenzie Newark N J—p 1029
*New Method for Clinical Diagnosis of Toxic Thyroid Sattes W N Berkeley and J Koopman New York—p 1035
Neoplasms in Light of Experimental Studies M W Lyon South Bend Ind—p 1037
Dengue M D Levy Galveston Texas—p 1040
Case of Influenza Complicated with Streptococcic Bronchopneumonia Endocarditis Arthritis and Pyemia, Recovery J Sellin Chicago—p 1042

Retrograde Stretching of Impermeable Cardiospasm.—Retrograde stretching with the pyloric dilator is preferred by Einhorn to passing bougies over a previously swallowed string It sometimes happens that even a flexible instrument cannot follow the string, if there is present too great a bend in the sacculation or an unyielding spasm at the cardia In cases in which an ulcer in the stomach is suspected or really discovered it is advisable first to accord the esophagus and stomach a period of rest before instituting the stretching treatment The later is best done first by the pyloric dilator every other day or twice a week, the dilator being introduced before retiring supplemented by a dose of atropin, and stretching done the following morning After a few stretchings the dilator enters the stomach in a much shorter time

Anesthesia Problem in Chest Surgery—This paper is based on between eighty and 100 animal experiments, and a large clinical experience with surgical teams working in the advanced zone of the American Army and confining themselves almost exclusively to chest surgery

New Method for Clinical Diagnosis of Toxic Thyroid States—Having observed that with normal dog thyroid random samples of exophthalmic goiter serum would bind powerfully, and that they would not bind with any other dog organ, Berkeley and Koopman made fixation experiments on more than 175 human serums, of which forty were under suspicion of positive thyroid dyscrasia Of the forty eighteen were clinically undoubted exophthalmic goiter, two were probably so ten were doubtful, and ten were probably not exophthalmic goiter The eighteen positive cases were all from one to four plus The probable cases were positive, six of the ten doubtful cases were positive, the ten probably not were all negative As to the controls, numbering more than 135 patients, all were negative except one with a tertiary specific skin lesion on one knee The new test has been repeated hundreds of times and has been checked up with all needful controls This reaction is apparently due to a specific thyroid substance which combines with an antibody in the blood of the patient The test is described in detail

Modern Medicine, Chicago

April 1920 **2** No 4

Contributions of Laymen to Medical Science J A Tobey, Washington D C—p 272
*Autonomic Nervous System and Disorders of Stomach H Wheelon and J E Thomas St Louis—p 283
Experience of Medical Department at Nitro W Va J A Watkins Cincinnati—p 293
Traumatic Surgery in its Relation to Workman's Compensation Laws R Lewy New York—p 298
*Cincinnati Survey of After Effects of Influenza P Mason Cincinnati—p 305
Public Health Notes from Vosges T C Merrill—p 308
Plan to Stimulate Family Physician in Diagnosis of Tuberculosis J J Moorman Oklahoma City—p 313
Tomorrow's Health—Doctor's Dilemma T J Werle Milwaukee—p 322
A Samaritan Quarter for Housing and Employing Semi Invalid S Wachsmann New York—p 326
Public Health Nursing in Italy E L Foley Chicago—p 331
Chicago Infant Welfare Society S B Place Chicago—p 335

Autonomic Disorders of Stomach—Wheelon and Thomas review the literature showing that the stomach may be regarded as an autonomic organ influenced to cooperative activity because of the intergrative action of the central nervous system acting through the vagus and splanchnic nerves The normal stomach is one in which added to its myogenic properties, a proper reciprocal innervation is maintained associated with a balanced chemism Alterations in any one of these elements will of necessity break the balance, and resulting pathologic functioning or symptoms will be in proportion to the degree of severity of the alteration

After Effects of Influenza—Outstanding features of the report by Mason are the high proportion of cardiac cases covering a wide range of seriousness the abnormal development of tuberculosis and pretubercular conditions and the large number of throat affections Hardly less striking is the absence of affections of the urinary organs from the statistical record The total number of persons examined was 7 058 Of this number 5 624 required medical attention and 1 434 were examined but not recommended for treatment, and 2015 were reexamined Defective vision hypertrophy of tonsils and adenoids diseases of respiratory tract, asthenias, cardiac diseases and defective teeth were the conditions encountered in greatest numbers The number of tuberculosis cases was striking in the respect that they were in nearly every instance new cases never before reported to the health department Mason links up with this epidemic the unusually large number of sudden deaths and presumably from heart disease, in persons who had had influenza

May 1920 **2** No 5

Reconstruction of Sick Child A Levinson Chicago—p 344
Epidemic Encephalitis J M Stanton St Louis—p 353
Standardized Surgical Methods in Industry C D Selby Toledo O—p 360
Necessity for Institute of Industrial Hygiene C Baskerville New York—p 363
Service Departments of R K Lebland Machine Tool Company I De Hart Cincinnati—p 365
Experience of Medical Department at Nitro W Va J A Watkins Cincinnati—p 370
Public Health Surveys H B Wood New York—p 380
Red Cross Public Health Nursing S Fuller Chicago—p 386
Nutrition Classes in Chicago Schools I C Wood and E McCormick Chicago—p 388
Students Health Service at University of California R T Legge Berkeley Calif—p 400

Nebraska State Medical Journal, Norfolk

May 1920 **5** No 5

What Everybody Ought to Know About the Roentgen Ray J C Bloodgood Baltimore—p 121
*Peritoneoscope in Diagnosis of Diseases of Abdomen B H Orndoff Chicago—p 124
Five Years Experience in Treatment of Cancer with Roentgen Ray A P Overgaard Omaha—p 126
Some Clinical Aspects of the Kidney Problem A D Dunn Omaha—p 130
Treatment of German Measles Pertussis Scarlet Fever and Diphtheria H B Hamilton Omaha—p 135
Mechanical Treatment of Compound Fractures of Upper Extremity J E M Thompson Lincoln—p 140
Aortic Aneurysm Report of Two Cases G P Pratt Omaha—p 143

Peritoneoscopy—Orndoff describes the peritoneoscope and the method of using it The instrument is inserted through the abdominal wall and is said to be of value in the diagnosis of tubercular peritonitis general or diffuse peritonitis hydroperitoneum postoperative shock where there is question of abdominal hemorrhage, extra-uterine pregnancy and ovarian cyst It permits of a direct view of the pathologic condition

New Jersey Medical Society Journal, Orange

May 1920 **17** No 5

Treatment of Disease in Aged W G Thompson New York—p 145
Chronic Purulent Inflammation of Middle Ear and Its Accessory Cavities As Seen by General Practitioner C F Keeler Philadelphia—p 152
Diagnostic Significance of History in Disease of Gallbladder Stomach and Appendix C G Heyd New York—p 155
Uses of Radium in Medicine H A Kelly Baltimore—p 160
Removal of Lower Extremity by Disarticulation of Hip Joint and Removal of Upper Extremity Including Scapula and Outer Third of Clavicle E Staehlin Newark

Can Arsphenamin Be Kept in a Permanent Solution? O Lowry Newark—p 167
Importance of Radiographic Examination of Thorax H A Knauss, Newark—p 168

Pennsylvania Medical Journal, Athens, Pa

March, 1920 23, No 6

Value of Early Diagnosis of Pleural Effusions S A Savitz, Philadelphia—p 307
*Acquired Pulmonary Syphilis E H Funk Philadelphia—p 310
Present Status of Therapeutic Pneumothorax in Pulmonary Tuberculosis A Armstrong White Haven—p 315
Nose and Throat Lesions Associated with Pulmonary Tuberculosis H H Farnsler Harrisburg—p 318
*Two Cases of Lung Abscess Following Tonsillectomy Under Local Anesthesia in Tubercular Subjects J R Simpson and H G Noah Pittsburgh—p 322
*Acute General Peritonitis in Infants F E Ross Erie—p 323
Acute Otitis Media Complicating Epidemic Influenza Observed in the U S Base Hospital Camp McClellan Anniston Ala J C Keeler, Philadelphia—p 325
Surgical Operations of War Industrial Activities at Methodist Episcopal Hospital Philadelphia L J Hammond Philadelphia—p 329
Our New Responsibilities D Riesman Philadelphia—p 330
*Errors in Diagnosis of Pulmonary Tuberculosis Joseph Walsh, Philadelphia—p 333
Medical Review of Last Fifty Years T B Hill Waynesburg—p 336
Pennsylvania State Prenatal and Postnatal Clinic at Henry Phipps Institute in Philadelphia C C Norris and N S Rothschild Philadelphia—p 338
Wassermann Test in Primary Syphilis W H Guy Pittsburgh—p 341

Acquired Pulmonary Syphilis—Although questioning the great frequency of lung syphilis which some writers maintain, Funk believes that among chronic lung patients will be found some who suffer because of a syphilitic lesion in the lung Among the nontuberculous group, those comprising the mycotic infections, chronic abscess, tumor, pneumokoniosis, etc syphilis is no mean contender Health can sometimes be restored in a few weeks or in a few months to persons who appear to be in the last stage of pulmonary tuberculosis Funk agrees with Hoffman, who states that patients have perished from pulmonary syphilis improperly treated under a mistaken diagnosis of pulmonary tuberculosis, etc, where restoration to health might have been possible had appropriate treatment been promptly instituted

Lung Abscess Following Tonsillectomy—The possibility of aspiration of infected material as a cause of pulmonary abscess is not denied by Simpson and Noah, yet they believe that more cases occur as a result of hematogenous infection than is generally supposed

Acute General Peritonitis in Infants—Four cases are reported by Ross The ages of the patients were 4, 8 and 3 weeks and 4 months respectively Only one case was characterized by persistent vomiting Neither diarrhea nor constipation were prominent features All patients had some elevation of temperature, high at the onset Cyanosis was present in one case and great depression in all cases The symptom common to all was marked distension of the abdomen with general abdominal tenderness In all cases the peritonitis seemed to be a part of a general septicemia complicating infectious processes in other parts of the body

Errors in Diagnosis of Pulmonary Tuberculosis—In the 471 necropsies at the Phipps Institute there were six cases which were not tuberculous, of these six two were properly diagnosed (both cardiovascular disease) and four were diagnosed tuberculosis, though one was carcinoma one actinomycosis and two cardiovascular disease This represents an error in less than 1 per cent These statistics constitute Walsh's personal experience with advanced cases diagnosed by about twenty different physicians, and, coming as they do from necropsies on consecutive deaths represent what a study of the physical signs can accomplish

April 1920 23 No 7

*Bacteriology of Pneumonia B Lucke Philadelphia—p 369
Pneumonia and Empyema T G Simonton Pittsburgh—p 372
Management of Pneumonia Its Complications and Sequels L Litchfield Pittsburgh—p 373
Surgical Complications of Pneumonia and Empyema E W Meredith Pittsburgh—p 376
Acute Alveolar and Interstitial Emphysema in Influenzal Bronchopneumonia F F D Reckord Harrisburgh—p 379
Medical Reserve Corps M W Ireland Washington D C—p 387
Removal of Spinal Cord Tumor Resulting in Entire Disappearance of Paraplegia and Neurologic Signs T Diller and O C Gaub Pittsburgh—p 392
Operations in Orthopedic Department of University of Pennsylvania W G Elmer Philadelphia—p 394
Impressions Resulting from Experience in Pennsylvania Legislature Session of 1919 F L Van Sickle Olyphant—p 401
Bladder Cystoscopic Diagnosis and Treatment of Certain Lesions of Genito Urinary Tract M Lieb Erie—p 404

Bacteriology of Pneumonia—The widespread and early bronchial changes, the marked proliferation and partly its catarrhal inflammation of alveolar epithelium in the lungs Lucke believes to be the result of the bacillus of influenza The damaged tissue thus produced is readily invaded by other organisms These, then, produce divers tissue changes, each typical of the species of invading micro-organisms

Spinal Cord Paraplegia Due to Tumor—Diller and Gaub cite the case of a healthy woman, aged 28, who had been for two years growing progressively weaker in the legs until they finally became almost completely paralyzed During this time she suffered considerable pain in and around the anal region, spreading over the buttocks Finally, impairment of sensation of all kinds from the level of the navel downward, exaggerated knee jerks on both sides, more marked on the left than the right ankle clonus and Babinski were noted At operation, there was found a small elongated tumor about the shape of the last phalanx of the little finger but smaller, growing from the dura and pressing across the cord below the level of the ninth thoracic vertebra It was easily removed and proved to be an endothelioma The cord was indented distinctly by pressure of growth but apparently uninjured The patient made a good recovery from the operation, showing some movement of the toes the next day She steadily gained more and more movement until at the end of two months she was able to stand and walk Sensory changes disappeared within two weeks and by the time the patient left the hospital knee jerks were normal and ankle clonus and Babinski toe reflexes were absent

Social Hygiene, Menasha, Wis.

April 1920 6, No 2

Social Consequences of Illegitimacy P G Kammerer—p 161
Professional Education of Women and Family Problem E R Weimbridge—p 181
Some General Aspects of Family Desertion W H Liebman—p 197
Antivice Movement in California I Suppression F Richborn—p 213
Eugenic Marriage Laws of Wisconsin Michigan and Indiana B C Roloff—p 227
Struggle Against Venereal Diseases and Prostitution in Switzerland N Wintsch Malcef—p 250
Sex Instruction Through English Literature L S Curtis—p 263

Southern Medical Journal, Birmingham, Ala

March 1920 13, No 3

Military Medicine as a Profession W C Braisted Washington, D C—p 153
*Chronic Appendicitis in Children McG Newton Richmond Va—p 166
Conditions that Simulate Pulmonary Tuberculosis W H Witt Nashville—p 169
Serum Treatment in Lobar Pneumonia Report of Cases G E Henson Jacksonville—p 178
*Calcification of Thyroid Gland J J Clark Atlanta—p 183
Early Diagnosis of General Paralysis of Insane E W Fell Cincinnati—p 184
Venereal Disease Control J P Bowdoin Atlanta—p 186
*Treatment of Empyema D Fye Nashville—p 190
Surgical Treatment of Empyema W W Grant Denver—p 195
Empyema Recent Experiences F K Boland Atlanta—p 198
Therapy in Obstetrics J R Garber Birmingham—p 201
Congenital Absence of Uterus Both Tubes and Right Ovary B O Robertson Birmingham—p 205
Displacement of Eye in Association with Chronic Frontal Sinusitis Report of Cases R C Lynch New Orleans—p 207
Atypical Mastoiditis S MacC Smith, Philadelphia—p 211

Chronic Appendicitis in Children—Newton is of the opinion that the roentgen ray is of great service in assisting to make a correct diagnosis of appendicitis in children who suffer from repeated digestive disturbances He reports four cases in which this point was brought out

Calcification of Thyroid—Clark's patient suffered from hyperthyroidism ten years before he saw her At the time of his examination she was suffering from hypothyroidism

Physical examination confirmed the presence of a hard freely movable tumor in the region of the thyroid, situated just above the suprasternal notch Roentgen-ray examination disclosed a calcified adenoma of the thyroid

Treatment of Empyema —Abstracted in THE JOURNAL, Dec 20, 1919, p 1900

Tennessee State Medical Ass'n Journal, Nashville

May 1920 **13**, No 1

Malaria Control in Tennessee W G Stromquist —p 13
Roentgen Ray Treatment of Open Wound for Cure of Cancer J M King Nashville —p 17
Pelvic Infection W M McCabe Nashville —p 18

Virginia Medical Monthly, Richmond

May 1920 **47** No 2

Fractured Vertebrae Report of Cases W L Powell Roanoke —p 49
Hydrochloric Acid in Symptomatology and Therapy of Stomach Diseases A G Brown Richmond —p 52
Laboratory Diagnosis of Typhoid E C L Miller and A H Straus Richmond —p 58
*Diverticulum of Bladder Report of Three Cases R L Payne Norfolk —p 60
Neoplastic Growths Treated Successfully by Roentgen Ray and Electrothermic Measures C A Pfender Washington D C —p 62
Blood Pressure as a Measure of Old Age C R Grandy Norfolk —p 68
Laennec's Stethoscope S W Dickinson Marion —p 70
*Foreign Body in Right Inferior Bronchus Removal by Use of Bronchoscope E G Gill Roanoke —p 72
*Scleroderma and Combined Sclerosis of Spinal Cord D R Murchison Richmond —p 74

Diverticulum of Bladder—Payne has operated successfully in three cases Radical extirpation was done in two cases, and a plastic operation, after the method of Squier, was done in the other case

Foreign Body in Bronchus—During an epileptic fit Gill's patient swallowed a piece of an artificial plate denture seven years ago Shortly following the accident the patient began having an itching and tickling sensation in her throat which gradually developed into a cough and became steadily worse more so at night Eighteen months after this injury the patient while bending over had a hemorrhage She has had hemorrhages at various intervals since but only when stooping over The roentgen ray located the foreign body in the right bronchus opposite the ninth rib using posterior markings and opposite the fourth interspace using anterior markings The fragment was removed with the aid of the bronchoscope

Scleroderma and Spinal Sclerosis—These two conditions were combined in Murchison's patient About two weeks after recovering from the grip, the symptoms of sclerosis appeared About one year after the attack of grip the first symptoms of scleroderma were noted.

West Virginia Medical Journal, Huntington

May 1920 **14** No 11

Hospital Legislation at Last Meeting of Legislature W W Golden Elkins —p 401
Significance of Pelvic Disorders in General Diagnostic Study of Women E H Richardson Baltimore —p 404
Case of Lethargic Encephalitis W H St Clair Bluefield —p 409
Acute Intestinal Obstruction G A Hendon Louisville —p 411
Tuberculosis Situation in West Virginia H B Jones Glendale W Va —p 416

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Archives of Radiology and Electrotherapy, London

April 1920 No 237

Leukocytic Blood Content of Those Handling Radium for Therapeutic Purposes J C Mottram and J R Clarke —p 345
Method of Fluoroscopic Examination with Army Bedside Unit F F Borzell —p 350
Watch in Esophagus Tracheotomy Tube in Trachea F A Stoney —p 352
Case of Tuberculosis of Stomach and Its Surroundings H C Geuken —p 354
New Standard Chart for Recording Tracing of Opaque Meals C P G Wakeley —p 356
Cases of Electrotherapy S Sloan —p 257
Clinical Method of Dosage of Ultraviolet Rays H Bordier —p 366

British Medical Journal, London

May 22 1920 **1**, No 3099

Chronic Paroxysmal Trigeminal Neuralgia and its Treatment W Harris —p 693
Significance of Acidosis in Certain Nervous Disorders B H Shaw —p 695
Care of Crippled Children G R Girdlestone —p 697
*Roentgen Ray Treatment of Acne Vulgaris H C Semon —p 700
Treatment of Sleeping Sickness by Arsphenamized Serum C H Marshall —p 702

Roentgen-Ray Treatment of Acne Vulgaris—Semon is convinced that a cure of acne can only be attained by the judicious application of the roentgen ray The nodular and keloidal varieties of the disease are not amenable to relief or cure by any other method Relapse after apparent cure by roentgen rays is rare Should it arise it can be dealt with by further irradiation There are no permanent contraindications to the treatment by roentgen rays

Dublin Journal of Medical Science

May 1920 **4**, No 3

Oil Ether Colonic Anesthesia A E Boyd —p 121
Lupus Tumidus B Solomons —p 133
Early Symptoms of Cancer of Colon S Pringle —p 156
*Ovarian Insufficiency as a Probable Cause of Epilepsy J S Ashe —p 142

Ovarian Insufficiency as Cause of Epilepsy—The suggestion made by Ashe is that the toxin which acts as the predisposing factor in some cases of epilepsy is produced by (*a*) absence diminution or change in the ovarian ferments leading to (*b*) some multiple functional deficiency of the endocrine organs which upsets the hormone balance producing further toxins which act on the cerebral cortex, causing epilepsy in some cases

Edinburgh Medical Journal

May 1920 **24**, No 5

*Transfusion of Blood in Pernicious Anemia J M Graham —p 282
Provisional Point Scale for Blind W B Drummond —p 307
*Osteitis Fibrosa Two Cases D M Greig —p 324
Vaccine Therapy in Gynecology and Obstetrics R Robertson —p 328
Types of Tachycardia and Irritable Heart A Goodall —p 334

Blood Transfusion in Pernicious Anemia—Of the twenty-three patients treated by transfusion by Graham transfusion was called for in thirteen within one year or less of the first symptoms of anemia In six cases the symptoms had existed for from one to two years The remaining cases were of a more chronic type In thirteen cases the patients had suffered from one or more relapses In ten cases, the symptoms were progressive Three patients were transfused a second time One patient was transfused on three occasions Direct transfusion from artery to vein was performed in nineteen cases and indirect transfusion from vein to vein in seven cases Citrated blood was used on two occasions It is definitely stated by Graham that although transfusion may cause a remission of symptoms it cannot bring about a cure in a case of pernicious anemia or alter in any material way the nature of the disease The ideal method of transfusion in Graham's opinion is either direct from artery to vein or, preferably indirect transfusion from vein to vein A large amount of blood is unnecessary owing to the risks of overtransfusion and to the fact that the benefit conferred by transfusion is not necessarily in proportion to the volume of blood received A repetition of transfusion should be considered when the symptoms relapse or if the first transfusion fails to produce the desired effect Transfusion is not to be regarded as an alternative to other forms of treatment but as a therapeutic agent available when the usual measures have failed

Fracture and Osteitis Fibrosa—In one case cited by Greig a fracture of the femur in childhood healed well and was followed by no untoward circumstance whereas a fracture of the leg seven years later was followed by an osteitis fibrosa of the tibia and a fracture of the same femur shortly afterward was followed by a similar affection of that bone Greig suggests that such an extraordinary occurrence points surely to some constitutional peculiarity of the bones or of the osteoblasts, so that the fresh deposition of healthy bone is interfered with The second case too is interesting in that the affection of the tibia was not preceded by a fracture it was apparently the result of overexertion

Japan Medical World, Tokyo

April 17 1920, **10**, No 16

Treatment of Gonorrhea S Hidaka —p 334
Mucor Found on Normal and Pathologic Skin Surface S Hanawa —p 334
Epidemic Influenza among Children Case of Influenzal Meningitis K Iwagawa —p 334 (To be cont d)

April 24, 1920 **10**, No 17

Epidemic Influenza among Children Case of Influenzal Meningitis K Iwagawa —p 353 (Concluded)
Pathology of Malignant Tumors in Nasal Cavity T Tanaka —p 353
Antirabic Treatment of Dog S Umeno and R Doi —p 353

Lancet, London

May 22 1920 **1**, No 5047

*Neonatal Mortality A Newsholme —p 1097
*Scurvy Prophylaxis in British Navy P W Bassett Smith —p 1102
Smallpox in Occupied Germany G G Johnstone —p 1105
Morbid Anatomy of Chronic Arthritis G L K Pringle —p 1106
Abrams's Method of Percussion to Delineate Solid Organs in Chest and Abdomen J Barr —p 1109
*Erythrocytes in Malaria R Craik —p 1110
Choice of Individuals for Colliery Rescue Work G A Stephens —p 1110
Perfect Dentition in Old Age J O Butcher —p 1111
Hysterical Paralysis in a Boy J A Gorsky —p 1111

Neonatal Mortality—Newsholme discusses this subject from the standpoint of its relation to public health He suggests the establishment of antenatal and postnatal clinics, skilled care during parturition, maternity homes and hospitals, a raised standard of midwifery practice

Lemon Juice in Prevention of Scurvy—Lozenges of dried lemon juice are used by Bassett-Smith The juice of fresh lemons is roughly filtered through muslin and then through filter paper under reduced pressure by means of a water pump The filtered juice is evaporated in vacuo over sulphuric acid at ordinary temperature (from 13 5 to 15 5 C) The residue of noncrystallizable syrup is worked up into as stiff a paste as possible with a mixture of anhydrous lactose, 97 per cent, gum tragacanth 3 per cent The paste is cut up into sections each containing the juice of half a lemon These are rolled, faced with the mixture and pressed to assume the lozenge form These tablets have been stored at 15 30 and 37 C for months, and have been employed in experiments The average yield of juice from one lemon is about 48 c c, and each tablet contains the equivalent of 24 c c of unfiltered juice The whole process takes about five days, no heat whatever is used

Effect of Lead on Erythrocytes—When lead is given, in health or in minor ailments, the blood film in most persons shows, in from three to seven days, a few polychrome, polychrome punctated and punctated reds Craik's impression is that punctated disks are always polychrome when they first appear Polychromasia means premature birth of the erythrocyte, and punctate basophilia denotes something more pathologic Even in mild anemia the former is seldom absent, whereas the latter is rarely present, unless the anemia is really serious Only when punctate basophilia is seen in normal blood associated with but little polychromasia is it pathognomonic of lead poisoning Thus lead enables one to turn into the circulation marked disks by which parasites may be traced Accordingly, in two mild tertians, with infected corpuscles less than one in 500 and with practically normal blood, this mixture was given lead acetate, 20 grains, dilute acetic acid 1 dram, chloroform water, 8 ounces Signa 4 drams, t d s On the fourth day, young rings were found in polychrome and in punctated disks Young parasites occurred in normocytes also and some marked disks were uninfected Next day ameboid and large pigmented forms were seen in punctated disks as well as rings Craik thinks that this proves the life of a punctated disk to extend to two days at least In polychrome or in polychrome punctated disk there were never seen any but young rings This proves that within twenty-four hours the polychrome disk develops into a normocyte In the same time a polychrome punctated disk becomes a punctated red Craik thinks that a similar test with the quartan parasite would show that punctation disappears within seventy-two hours in approximately normal blood Multiple infection suggests that certain corpuscles are less resistant than others and are the youngest corpuscles

May 29, 1920 **1**, No 5048

*Lethargic Encephalitis F Bramwell —p 1152
*Advantages of Extension in Treatment of Diseased Joints W Arbuthnot Lane —p 1159
Clinical Diagnosis of Diphtheria and Other Exudations in Throat H Drinkwater —p 1160
*Three Cases of Modified Smallpox W Allingham —p 1162
*Full Time Tubal Pregnancy Cesarean Salpingectomy Recovery R E Smith and C B Leeds —p 1163
Medical Progress in China Since the Republic Wu Lien Teh —p 1203

Pathology of Lethargic Encephalitis—The material forming the basis of the pathologic inquiry made by Bramwell consisted of five fatal cases He found (1) hemorrhage rare, (2) edema of the nerve tissue, (3) proliferation of neuroglia, and (4) infiltration of nerve tissue and perivascular lymph sheath with cells, usually lymphocytelike in type These changes were seen most strikingly in the ventral portion of the pons, especially in the region of the substantia nigra, implicating the fibers of the third nerve as they pass out, and thus accounting for one of the common symptoms of the disease In no case were any organisms, or bodies suggesting organisms, seen

Extension for Diseased Joints—If a diseased joint is moved forcibly without being extended, the articular surfaces are bruised or otherwise damaged, and acute inflammation follows only too frequently, whereas under the influence of extension, the surfaces of the fixed or displaced joint can be moved freely on one another, so that such movement is followed by a minimum degree of rapidly subsiding inflammation The apparatus used by Lane, although not original with him by means of which extension is kept up on the affected joint is applied to the limb and the patient at once proceeds to lead an active life The mode of treatment varies to some extent with the joint affected By means of extension and movement, Lane has been able to restore the function of many joints which would otherwise have been fixed, probably in a bad position, and materially interfering with the usefulness of the individual

Modified Smallpox.—The cases cited by Allingham followed the same course with varying severity, in conformity with their vaccinal states, each exhibiting similar characteristics as regards rashes and distribution In each case headache was followed in three days by a papular rash (on forehead and chest), rapidly becoming vesicular and gradually involving the whole trunk and extremities equally Flexor surfaces were affected as much as extensor with several spots in both axillae, palms of hands, soles of feet, and soft palate were quite free The vesicles were discrete, soft and flat, some were ovoid, not umbilicated and collapsed on puncture As no history of contact with smallpox could be obtained in the first case, the diagnosis of chickenpox was made, but on the eighth day of the first rash a second rash made its appearance, unaccompanied by any constitutional disturbance except a slight headache in the mildest of the three cases This secondary rash, which was petechial, deep and somewhat shotty, affected those parts more especially involved in true smallpox, that is, the brow, wrists, extensor surfaces of the forearms and legs, palms of hands and soles of feet, in two cases vesicles were seen on the soft palate By this time most of the first rash was becoming dry, but many vesicles still remained full of lymph and quite soft The two rashes were quite distinct and could easily be differentiated Allingham suggests that it might be wise to insist on isolation of chickenpox for the first ten days

Full Time Tubal Pregnancy—That incomplete rupture of one or more of the coats of the tube may not have occurred in the earlier months of the pregnancy is not denied by Smith and Leads but if it did, there was later sufficient reinforcement by adhesions and localized *protective peritonitis* (as shown by repeated alarms) to thwart complete rupture and allow a viable child to go to full term until delivered by surgical interference

Medical Journal of Australia, Sydney

April 17 1920 **1**, No 16

Applied Psychology and Suggestive Therapeutics J V McAree —p 356
Tonsillectomy as Means of Treatment in Diphtheria Carriers G Brown and E K Hughes —p 361

April 24 1920 **1**, No 17

Physiology of Ductless Glands H Priestley —p 381
Catarrh So Called Nasal and Postnasal Its Causes and Treatment A J Brady —p 383
Nonligature of Proximal End of Umbilical A J Bothamley —p 385
Gibbon's Hydrocele C MacLaurin —p 385
Hernia of Vitreous in Anterior Chamber J L Gibson —p 387

December 1919 **2** No 3

Sarcoma of Duodenum A G Ellis and N K Plaukul —p
Case of Strangulation by Meckel's Diverticulum P Sakdabolraksh

Practitioner, London

May 1920 **104**, No 5

*Trauma and Tuberculosis T Oliver —p 321
Diseases of the Liver T Horder —p 330
Medicolegal Notes J Collie —p 333
*Vaccines in Treatment of Cutaneous Diseases J M H Macleod —p 338
Opaque Meal and Opaque Enema F Hernaman Johnson —p 344
*Acute Appendicitis Study of 370 Cases E R Flint —p 352
Manganese in Suppuration E Watson Williams —p 375
Nauheim Bath Treatment of Hypertension L T Thorne —p 379
Malignant Malaria in a Baby—Recovery W G Marsden —p 393

Trauma and Tuberculosis—It is Oliver's opinion that when tuberculosis follows injury it is more in consonance with pathologic experience to believe that a tuberculous lesion had been present in the body previous to the accident and had been lying dormant All that injury, therefore could do, would be to rouse into activity a lesion which has been inert probably for years The subject of trauma and tuberculosis has received additional interest and opportunities of investigation during the war owing to the large number of gunshot wounds of the chest wall, superficial and penetrating Oliver's experience is that only in a extremely small number of wounded soldiers has the relationship been observed

Vaccines in Skin Diseases—Of all the cutaneous conditions which MacLeod and others treated with vaccines, the only ones in which immediate and definite benefit resulted were suppurating staphylococcic lesions especially acute recent and recurrent boils by vaccines both stock and autogenous they had been able to cause the rapid involution of boils without the assistance of any form of local treatment and in almost every case to keep the patient free from recurrences though there was often a tendency to relapse after the treatment was discontinued In the case of chronic boils such as those about the back of the neck in which the circulation through the boil is impeded by the formation of scar tissue the results were uncertain and, as a rule, unsatisfactory In acne vulgaris, the results were not encouraging, where suppurative lesions predominated, the vaccine treatment caused a diminution in the pustulation but did not influence the comedones and when it was discontinued an exacerbation of suppuration generally took place In those cases of acne, chiefly in adult women in which the comedones were few or absent and which were associated with small more or less indolent subcutaneous abscesses little or no benefit was derived from the treatment In sycosis barbae of coccogenic origin the results were uncertain and not to be compared with those from other methods In tuberculosis cutis, improvement was obtained from Koch's original tuberculin in lupus with superficially ulcerated patches and healing had taken place in such lesions on the subsidence of the local reaction, but this procedure, even when small doses were given, was regarded as too dangerous for fear of lighting into activity unknown foci of the disease in other organs The results with bacillary emulsion were irregular and, though some improvement was obtained at times in superficially ulcerated patches of lupus and in scrofulodermia in no case did they find that the benefit from it was in any way equal to that which could be obtained by appropriate local treatment

Postoperative Treatment of Appendix Dyspepsia—Flint suggests that patients who present a history of prolonged appendix dyspepsia, previous to the acute attack or attacks should have merely water by mouth for several weeks after appendectomy, provided that the physical state is sufficiently good to permit of this rather stringent treatment The ordinary medical treatment of gastric ulcer should be followed after operation

Bulletin de l'Academie de Medecine, Paris

April 27 1920 **83**, No 17

Contagiousness of Lethargic Encephalitis A Netter —p 375
Ocular Manifestations of Lethargic Encephalitis F de Lapersonne —p 384 Idem C Achard —p 387
Acquired Immunity to Influenza Chauffard —p 394
One Thousand Operations for Goiter L Berard —p 97

May 4 1920 **83** No 18

*Resection of Esophageal Diverticulum H Hartmann —p 410
Acquired Immunity to Influenza Dopter —p 415
Tumor of Uterine Cervix in Monkey Marullaz —p 417

Esophageal Diverticulum—Hartmann's patient was a woman of 61 who for nine years had had symptoms indicating a diverticulum in the upper esophagus For the last ten months there had been excessive flow of saliva and frequent regurgitation of food and swallowing had become more and more difficult When the neck was stretched a tumor appeared at the side of the neck most pronounced on the left Hartmann made an opening into the stomach and through this fed the patient for a month until she had regained strength Then he removed the diverticulum through an incision along the inner margin of the sternomastoid muscle It opened into the esophagus at the junction with the pharynx where there is always a weak point in the wall The ease of the operation and the complete relief from all disturbances justifies similar intervention in such cases In a second case in a man of 65 there is so little disturbance that surgical measures are not required as yet

Bulletin Medical, Paris

April 28 1920 **34** No 2

*Auscultation of Venous Pulse O Josue —p 391
*Paroxysmal Tachycardia P Chevallier —p 95
Extrasystolic Arrhythmia A Mougeot —p 402

May 5 1920 **34**, No 24

Diagnosis of Bradycardia D Routier —p 417

Auscultation of Venous Pulse—Josue declares that auscultation of the venous pulse will supply information in the majority of cases such as can be obtained otherwise only by cardiographic methods of exploration It is no more difficult than auscultation of the heart He describes the points which differentiate bradycardia of sinus origin the sounds heard on auscultation representing the peaks of the cardiogram etc The subject must be reclining flat on his back the head low without a pillow The stethoscope is applied between the sternal and clavicular attachments of the sternocleidomastoid immediately back of and as close as possible to the clavicle The stethoscope should not be applied perpendicularly to the axis of the neck but should almost parallel it slanting downward backward and inward, pointing to the mediastinum The pressure should be minimal and the subject should hold his breath during the auscultation The radial pulse helps to explain the sounds

Paroxysmal Tachycardia—Chevallier enumerates a number of things that can be done to arrest by reflex action a paroxysm of tachycardia swallowing a chunk of bread an emetic to induce vomiting, lying on the back and breathing slowly keeping the chest full of air drinking something with big gulps tickling the pharynx with a feather, pressing on the right pneumogastric in the neck or giving every ten minutes a cachet of 0 15 gm pituitary extract If the paroxysm keeps up some preparation of digitalis may be needed and if there is accompanying fever a purge and then 6 or 8 gm of sodium salicylate daily with sodium bicarbonate for a few days and then half the dose During the intervals moderation in all things should be the rule Paroxysmal tachycardia is not incompatible with an active life Specific treatment is required for the syphilitic even if there is nothing to suggest the syphilitic origin of the tachycardia Sedatives may prove useful for the nervous and ovarian treatment in climacteric conditions Perseverance is the main factor in successful treatment

Bulletins de la Societe Medicale des Hôpitaux, Paris

March 19 1920 **44** No 11

Lethargic Encephalitis G Brouardel
391 394 407 414 and 422

*Lower Margin of Liver R Glenard and J Aimard.—p 411
Radiology of the Kidneys after Insufflation of Air into Peritoneal Cavity L Ribadeau Dumas, Mallet and de Lauleric.—p 418

The Lower Margin of the Liver—Glenard and Aimard do not think it necessary to insufflate oxygen for investigation of the lower margin of the liver except in very dubious cases Radioscopy alone is generally sufficient, the question then is whether the shadow below the liver is from the enlarged gallbladder or an appendicular lobe This can be decided by palpation with the thumb Seated on the bed facing the patient, at the close of inspiration, the thumb tries to lift up the crest of the margin of the liver working from below upward and from behind forward first raising the right lumbar region to bring the crest into prominence and pressing down on the left iliac fossa to drive the mass of intestines back under the liver With this thumb procedure, the liver lobe is easily distinguished by its shape from the rounded lower pole of the gallbladder It also helps to distinguish between pain in the gallbladder and pain in the liver, and often renders roentgen examination superfluous

Encephale, Paris

Jan 10 1920 **15** No 1

Traumatic Softening of Spinal Cord Claude and Lhermitte.—p 1
Lateral Sensory Spinal Roots P Quercy.—p 13
Treatment of Lax Paralysis of Arm L Menciere.—p 21
Psychanalysis in Treatment of Morbid Worry L Trepsat.—p 35

April 10 1920 **15** No 4

The Sweating Function after Injury of Brain or Spinal Cord Andre Thomas.—p 235
Multiple Deformities in a Mental Degenerate Lugnel Lavastine and G Heuyer.—p 255
Polyneuritic Pachydermia after Freezing of Feet L Marchand.—p 259

Correction of Lax Paralysis of the Arm.—Menciere's plates show his technic and his success with orthopedic and surgical measures in correction of flaccid paralysis consecutive to anterior poliomyelitis

Paris Medical

April 24 1920 **10**, No 17

Hydrologic Congress Address of President Gilbert.—p 333
Functional Insufficiency of Pulmonary Orifice Complicating Mitral Stenosis Vaquez and Maginel.—p 340
Postprandial Diarrhea Caused by Coffee J J Matignon.—p 342
Injections of Mesothorium Combined with Radiotherapy Guilbert.—p 345

May 1 1920 **10**, No 18

Role of Different Food Elements in Nutrition G Linossier.—p 349
*Epilepsy in Relation to Diabetes M Labbe.—p 354
Arthritism and the Endocrine Glands Mouriquand.—p 358
Electrotherapy in Pathologic Nutrition J Bergonie.—p 364
*Glucose Excretion Threshold in Diabetics F Rathery and E Gruat.—p 372
Cereals in Treatment of Diabetics E Lambling.—p 378

Epilepsy in Relation to Diabetes—From four cases of his own and from a study of the cases reported in the literature, Labbe concludes that diabetic epilepsy is a manifestation of acidosis In cases of acidosis in which there is no cause for assuming uremia or any other intoxication, occasionally epileptiform seizures develop which it seems justifiable to associate with acid intoxication They are localized or general, and are followed by loss of consciousness, either transitory or prolonged They may precede diabetic coma, or appear after the diabetic coma has begun, or occur long before coma sets in

The Excretion Threshold for Sugar in the Blood in Diabetics—By the excretion threshold Rathery and Gruat designate the level of the glucose content of the blood above which the surplus is thrown off by the kidneys Sodium chlorid and glucose are typical threshold substances, in contrast to other substances such as urea uric acid, methylene blue etc, which the blood tends to eliminate so long as there is any present As the result of analysis of their own cases and study of the literature Rathery and Gruat have reached several definite conclusions in regard to the excretion threshold for sugar in diabetes A high glucose threshold does not necessarily signify a case refractory to dietetic treatment, nor does a moderately high threshold imply a mild diabetes

Variability of the threshold is more significant than its mere increase A high threshold, with great variability, points to easily controllable diabetes, but if the threshold does not fluctuate much, then a high level is of grave import A moderately high but nonfluctuating threshold is of doubtful prognosis The relations between the rise of the threshold and the degree of glycosuria have likewise a prognostic and therapeutic value, as they explain in detail When the glucose threshold and the degree of glycosuria vary in the same direction, the main thing to note is the degree of stability of the threshold If the glucose threshold and the glycosuria vary inversely either the threshold is high and the glycosuria is nil or very slight, or the threshold is low and the glycosuria is high In the former case the prognosis is usually unfavorable In the latter case the prognosis is somewhat more favorable provided the threshold is slightly variable The glucose threshold varies greatly in different diabetics The excess of glucose in the blood above the glucose threshold will explain a certain number of glycosurias, but not quite all The variations in the glycosuria are at times quite incommensurate with the modifications of the hyperglycemia In any event, in different subjects there is a wide range of difference in the percentage of glucose excreted in the urine in the presence of a given hyperglycemia, for the reason that the kidney itself plays an important part in the modifications of the percentage of glucose excreted

May 8 1920 **10** No 19

*Uremia in Jaundice from Hemolysis A Gilbert E Chabrol and H Benard.—p 385
Absence of Anaphylaxis Producing Sensitizer in the Mishaps from Neo Arsphenamin G Milian.—p 391
Technic for Radium Treatment of Cancer of Esophagus and Larynx J Guisez.—p 392

Uremia in Hemolytic Conditions—The last few years have demonstrated the frequency of uremia with infectious jaundice with or without kidney disease Gilbert and his co-workers here report instances of uremia accompanying jaundice in blackwater fever in pernicious anemia, and in chronic jaundice with enlargement of the spleen and hemolysis In six of seven cases of pernicious anemia the urea content of the blood was over 0 7 gm The maximum was 2 7 gm in one case in the terminal phase, in the terminal phase of tuberculosis and cancer they never found over 0 31 to 0 54 Both retention of urea and exaggerated production seem to be involved in this Perfusion of hemoglobin directly into the liver of a dog not only increased production of bile but also increased production of urea, the liver evidently predominantly responsible for both The urea content of both blood and urine was found extremely high in cases of hemothorax These and other facts cited seem to sustain the assumption that, in the domain of the general circulation, urea is produced by a mechanism very comparable to that of the production of bile The liver is responsible for both, depending on the same factor, destruction of blood The question now is to determine to what extent hemolysis is involved in other causes producing urea

Presse Medicale, Paris

May 8 1920 **28**, No 29

*Treatment of Neurosyphilis J A Sicard.—p 281
*Diagnosis of Ulcer in Digestive Tract L Meunier.—p 283
Pathogenesis of Osteoma in Muscle Nathan.—p 284
Present Status of Treatment of Chancroidal Bubo L Chemisse.—p 285

Treatment of Neurosyphilis—Sicard gives neo-arsphenamin in doses of 0 15 gm dissolved in 1 c c of distilled water, injected every day or second day, without any mercury He asserts that this method of daily small doses subcutaneously or by the vein has given remarkable results in neurosyphilis during his two years' experience with it He thus gives during the year up to a total of 8 or 10 gm for paraplegia, 20 or 25 gm in tabes, and 28 or 30 gm in general paresis Some patients in the course of the two years have taken up to 40 or 50 gm This technic he says, avoids serious reactions, prevents anaphylaxis, and the outcome in his 200 cases

is at least equal to that with other methods and usually surpasses it Among the four types of minor by-effects was erythema, observed early in the treatment in about 7 per cent and tardily in 2 or 3 per cent , tardy jaundice in 2 per cent , transient slight uremia was common He suggests that possibly the puffiness of the face and ankles with large doses of arsenic may be from retention of chlorids In about 6 per cent of his 200 cases in the course of treatment it proved impossible to elicit further the Achilles tendon reflex This *arc flexic achillécnne* he continues, has persisted unmodified in his cases to date, while the knee jerk never showed any change He adds that it might be possible to utilize in treatment of spastic disturbance and contracture this affinity of arsenic for the neuromuscular-tendon system of the back of the leg

Diagnosis and Location of Ulceration in Digestive Tract—Meunier explains that blood is not found in the digestive tract as such but only in the form of hematin and this is usually coated with mucus in case of an inflammatory process Neither are soluble in water, gastric juice or duodenal juice but both are readily dissolved by ammonia To differentiate an ulcer and locate it he gives through the stomach tube 200 c c of water containing 10 drops of official ammonia, after two days of a milk-vegetable diet The stomach content can then be examined at once for blood The stools are not examined until the next day, to allow for demarcation with charcoal With this ammonia technic, blood is detected in the stomach content so frequently that he is convinced that every true pain in the stomach is traceable to some solution of continuity in the mucosa whatever the nature of the gastric secretion When there is no blood in the stomach content but the stool shows blood then the ulcer symptoms can probably be referred to the duodenum Blood from hemorrhoids is in the hemoglobin form soluble in water, but blood from the intestines above is in the form of the insoluble hematin and can be dissolved by addition of a little ammonia to the stools To differentiate ulcer from cancer he keeps the patient in bed a week, examining regularly the stomach content by the ammonia technic, the persistence of positive findings testifies to cancer This *repos hemostatique* has often rendered the greatest service in excluding malignant disease

May 12 1920 **28** No 30

*Chyluria in Filariasis E Jeanselme and others—p 293
*Hyperpyrexia E Lesne and L Binet—p 295
Sign of Anteropo terior Fracture of the Astragalus G Kuss—p 296

Chyluria with Filariasis—Jeanselme and his co-workers discuss the characteristic rhythm of the output of urine and the chemical composition of the urine in two cases of filariasis

Fever with Extremely High Temperature—Lesne and Binet report the case of a woman of 38, inclined to be ultra-nervous, who in the course of a meningeal reaction during mild pulmonary tuberculosis had the temperature run up to 43 7 C (110 F) and again six days later to 44 C (111 2 F) measured in the rectum with three thermometers It kept at 43.2 C (109 5 F) for more than twenty-four hours The nervous system is undoubtedly responsible for this hyperpyrexia and treatment should aim to reduce the nervous excitability and induce sleep

May 15 1920 **28** No 31

*Pericarotid Sympathectomy R Leriche—p 301
Minor Signs of Lethargic Encephalitis H Roger—p 302
*Relative Size and Shape of Heart and Body A Martinet—p 302
Cysts in the Wris and Tuberculosis J Murard—p 304
Carbon Monoxid Poisoning L Binet—p 304

Pericarotid Sympathectomy—Leriche announces that removing the sheath of sympathetic nerve fibers around the internal carotid artery for a stretch in the neck, causes pronounced constriction of the carotid artery for a few hours and other effects such as we are accustomed to observe only after removal of the superior cervical ganglion including durable enophthalmos ptosis, miosis and transient vasodilatation in the fundus of the eye The results in his four cases suggest that excision of the cervical ganglion is a mutilation out of all proportion to the purpose as the desired effects can be obtained by merely excising some of the isolated fibers, instead of the whole of the ganglion For example, in exophthalmic goiter, this denudation of the carotid artery might cure the exophthalmos, severing the superior cardiac nerves might arrest the tachycardia, supplemented by resecting the sheath of nerve fibers surrounding the superior thyroid artery In trigeminal neuralgia, pericarotid sympathectomy of both carotid arteries might answer the purpose The intense constriction of the carotid artery under irritation of its sympathetic innervation shuts off the blood from the brain and this might explain sudden death under certain jiu-jitsu maneuvers or accidental hangings This temporary reduction of the caliber of the carotid might possibly be utilized to ward off hemorrhage in operations on the brain It might explain also some of the pathologic phenomena observed with fracture of the skull

Relative Size of Heart—Martinet uses a sliding gage like that used in shoe stores to record the diameter of the chest from axilla to axilla, he records also the longest longitudinal and transverse diameters of the heart and the minimum (slanting) diameter of the aorta These, with the height furnish an index of the relative values of heart and aorta with different builds Even merely dividing the height by the chest diameter gives a more instructive index of robusticity' than any hitherto suggested He was impressed with the close connection between the diameter of the chest and the diameter of the aorta and also between the measurements of the heart and aorta and the blood pressure particularly in those with sluggish circulation and weak pulse The index thus throws light on diagnosis, prognosis and treatment Several charts showing the various measurements are reproduced

Revue Neurologique, Paris

February 1920 **27** No 2

Histology of Nerve Centers in Friedreich's Disease Three Cases G Marinesco and C Tretiakoff—p 113
Isolated Aphasia from Contrecoup with Contusion of the Skull F Bremer—p 132
Extreme Albuminosis in Totally Coagulating Spinal Fluid A Souques and P Lantouejoul—p 137
Posterior Longitudinal Fracture of Petrous Bone with Paralysis of Spinal Nerve G L Regard—p 141
Congenital Hemihypertrophy of Limbs and Ear C Roubier—p 147
*Principles for Syphilometry A Vernes—p 156

The Principles of Syphilometry—Vernes applies this term to measurement of the intensity of the syphilitic infection at a given moment and he shows how it is possible to supervise the course of the case by repeated simple colorimetric syphilimetry The main thing is to have a suspension of ultramicroscopic particles of a determined size and known stability for the standard reagent always alike He is director of the Institut Prophylactique, and his innumerable tests of various substances for the purpose showed that both organic and mineral substances can be utilized but he has found most satisfactory a mixture of thirty-nine parts of 9 per thousand sodium chlorid solution with one part of what he calls perethynol which is obtained by repeated extraction of pulverized horse heart in a vacuum with ethylene perchlorid and alcohol The perethynol is a solution of 15 gm of this dry extract in 1 000 gm of alcohol at 60 C This extract provides particles of a constant average size when mixed properly with the salt solution under control of the absorption of light by the particles Flaking occurs when normal human serum is added to the suspension but the flaking is much more intense with syphilitic serum and the degree of flaking is an index of the severity of the syphilis at the moment Pig serum prevents flaking or if the flaking has occurred, dissolves the flakes On the other hand pig serum lakes sheep erythrocytes But if it has exhausted its energy against the flakes it is incapable of laking the erythrocytes or if it is only partially exhausted it will lake only part of the erythrocytes These properties of pig serum are utilized for the systematic syphilimetry and it is thus transformed he says from empiric guesswork to a rel[illegible] For this the human

to the test suspension and then, after a certain interval the sheep corpuscles—all in exactly calculated amounts This reveals the flocculation induced by the syphilitic serum but which has been held in check by the pig serum, the tint from the amount of laking produced forming the colorimetric scale A previous communication by Vernes on the nature of the seroreaction in syphilis, was summarized in THE JOURNAL, Aug 2 1919, p 372 He gives here the list of his various publications on the subject referring for the minuter details of his technic to the *Bulletin des sciences pharmacologiques* **25** 321 1918, and **26** 449, 1919

Schweizerische medizinische Wochenschrift, Basel

April 29 1920 **50** No 18

*Acute Appendicitis in Children J Dubs —p 341
Backward Protrusion of Aneurysm of Aorta M Pierroz —p 346
Climate of Certain Swiss Health Resorts W Knoll —p 349 Conc n

Differential Diagnosis of Acute Appendicitis in Children—Dubs recalls that children and some adults localize pain in the stomach region when the appendix is the seat of the disease process Also that when the symptoms seem to suggest acute appendicitis the contrast between the serious general condition and the slight local findings in the appendix region along with the sudden high fever up to 39 5 or above should suggest the false appendicitis of pneumonia With pneumococcus peritonitis the pneumococci have been found in the urine even from the earliest phase of the peritonitis and girls from 4 to 10 are the ones usually affected Dubs obtained a positive response in six of nine cases Ileus from ascarides and tuberculous mesenteric glands are generally mistaken for appendicitis, and both seem to be becoming more frequent of late Rost has recently demonstrated substances in the ascaris body which have a tonus increasing action and others a tonus depressing influence while fluid from the interior of the ascaris body is extremely irritating In only six of eleven cases of primary tuberculous mesenteric glands was the diagnosis made before the operation The patients were from 6 to 18 years of age and all have been apparently cured by the operation whether the symptoms were from a recent acute exacerbation of the mesenteric tuberculosis or the rupture of one or more old cheesy glands In both events the ileocecal region is the one generally involved and the rupture cases induce a clinical picture very much like that of perforated appendicitis Even when the abdomen has been opened the tuberculous mesenteric glands and the glands sharing in the disease with acute appendicitis closely resemble each other, so that differentiation may be difficult, palpation is the main reliance The children with mesenteric tuberculosis are generally frail the temperature high, but the general condition is comparatively good in contrast to the high fever, and the extremely mild local findings He has never excised tuberculous mesenteric glands, restricting his intervention to injection of one or two syringefuls of iodoform oil in the abdominal cavity and suturing at once without draining His cases all made a clinical recovery under general treatment for tuberculosis and he is positive that mesenteric gland tuberculosis is more common than generally supposed, and often heals spontaneously

Policlinico, Rome

April 12 1920 **27,** No 15

Coagulation of Milk by Colon Bacillus C Gorini —p 427
Migration of Projectiles P Bertoli —p 429
*False Ascites in Children S Segagni —p 431

False Ascites in Children—Segagni cites seven cases from the literature which resemble four he reports from his own practice in which the large size of the abdomen and the extensive area of dulness, changing its position with change of attitude suggested ascites, but the liver, spleen, heart and kidneys seemed to be sound All had been having protracted diarrhea and the tissues were flabby The intestines gorged with fluid had sunk down into the lower part of the abdomen Injection of fluid into the intestines exaggerated all the findings and as the fluid was voided the findings became less and less pronounced In some of the cases on record laparotomy was done, but the anticipated ascites was not found

April 19 1920 **27,** No 16

Vaccination Against Whooping Cough T Luzzatti —p 451
Acetonuria in Influenza G Izar —p 453
*Treatment of Empyema E Gallo —p 454
Lethargic Encephalitis with Crossed Paralysis E Bandiera —p 456

Vaccination Against Whooping Cough—Luzzatti thinks there can be no question of the prophylactic efficiency of the antipertussis vaccine he used in three families with numerous children when one of the children in each family developed whooping cough None of the two or three other children showed any signs of the disease They were given the preventive injection when the older child began to cough Not until ten days later was the diagnosis of pertussis made absolutely certain by the typical paroxysms There was no attempt at isolation of the younger children but none showed any signs of the disease except one child that developed a catarrhal cough which soon subsided without any spasmodic tendency The vaccine was made by Nicolle of Tunis from agar blood and Martin broth cultures of the Bordet-Gengou bacillus centrifuging repeatedly with fresh amounts of a solution of sodium fluorid until the emulsion was rinsed free from toxic products with 500 millions per cubic centimeter heated to 104 F for forty-eight hours He applied the vaccine in treatment in a number of advanced cases of whooping cough but was unable to detect any benefit from it The outcome might be better when given earlier

Empyema—Gallo uses a cannula with guide and oval disk for siphon drainage through the eighth interspace on the posterior axillary line In a case described at the eighth day the long tube was discarded and through a Potain aspirator he injected into the pleural cavity 200 or 300 c c of dilute hydrogen dioxid aspirating it out again at once This daily rinsing out of the cavity was kept up for twelve days and then the cannula which had been left in place throughout was finally removed With this simple technic, ideal healing was complete in less than a month

Riforma Medica, Naples

April 10 1920 **36** No 15

Lethargic Encephalitis G B Queirolo —p 61 Idem C Cantieri and R Negri —p 367
Artificial Palate B de Vecchis —p 69
The Dispensary in Campaign Against Tuberculosis Ilvento —p 370

April 17 1920 **36** No 16

*Alopecia from Emotional Stress C Todde —p 382
Amebic Hepatitis O Castiglioia —p 384
Endiapedesis in Inflammatory Processes G Galeotti —p 387

Alopecia from Emotional Stress—The officer of 34 had never had any disease of the scalp but he was of the lymphatic constitution and had had phlyctenular conjunctivitis The stress of life at the front was capped finally by a week of incessant bombardment which was followed by the rapid dropping out of all the hairs not only on the scalp but on the body the eyebrows and moustache A nervous taint was apparent in the family and the young man presented certain symptoms suggesting exophthalmic goiter Boschi has reported a case of mild hyperthyroidism in which after severe emotional stress the woman's hair all dropped out in two or three weeks Under treatment for hyperthyroidism the hair grew again in a few months Todde has begun tentative organotherapy in the case of the young officer

Anales de la Facultad de Medicina, Montevideo

January February 1920 **5,** No 1 2

Hospital Hygiene E Fabre (Paris) —p 1
The Thermal Springs of Chile O Maira —p 20
*Echinococcus Cysts in Children V Zerbino —p 46
*Supernumerary Ureters L Piñeyro Carve —p 100

Echinococcus Disease in Children—Zerbino states that in a total of 1,511 cases of echinococcus cyst since 1896 at Montevideo children formed from 20 to 32 per cent The cyst makes itself manifest in a child usually in from one to six years, while in adults the interval is from two to eight years His experience does not confirm Deve's assumption that hydatid cysts in adults can generally be traced back to childhood

Double Ureters—Pineyro cites Motzfeld's statement that he found anomalies in the kidneys in 1 75 per cent of 4,500 cadavers This included 0 51 per cent double ureters Weigert found 10 per cent and Piñeyro has encountered four cases himself, which he describes reproducing the roentgen findings One man of 37 had bilateral double ureters, and in one young man the left kidney was removed on account of partial pyonephrosis and two ureters were found In another man the diagnosis of the double ureter was made from the cystoscopic findings of the two ureter mouths In his fourth case there seemed to be merely an accessory ureter These anomalies are liable to entail serious trouble on account of the small size of the lumen In examining the bladder we must not be content with locating the normal ureter mouths but should seek for an extra mouth or mouths

Revista de Medicina y Cirugia, Havana

March 10 1920 **25**, No 5

Jacksonian Epilepsy for Twenty One Years Cured by Operation J Arias Avellan—p 107
The Probable Capacity of the Skull in Delinquent Minors I Castellanos—p 113
Cysticercosis of the Brain in Argentina N Lugo Viña—p 120

March 25 1920 **25** No 6

Multiple Fibromas Complicating Pregnancy E Stincer—p 131
Prophylaxis of Influenza V M Perez Lerena—p 135

Semana Medica, Buenos Aires

Jan 15 1920 **27** No 3

*Osmosis and Edema L J Facio—p 73
*How to Teach Infant Hygiene P Rueda and others—p 75
Histopathologic Processes in Healing of Tuberculosis S de Madrid—p 100

Osmosis in Edema—Facio regards the ratio between the serum globulin and the serum albumin—the proteic coefficient which is 0 67 in normal blood—as the index of osmotic balance When this balance wavers or is upset, the osmosis may be so deranged that edema of various degrees of intensity results This may occur even without retention of sodium chlorid the liver feeling the effect of the autointoxication resulting from chronic nephritis, and thus its production of serum albumin being modified The reduction of the proteic coefficient represents the ultimate biologic phase of the pathologic process of chronic Bright's disease

Infant Welfare Work—Rueda's article and a number of minor articles, all dealing with puericulture are reproduced as delivered at the Child Welfare Congress at Montevideo last year

Kitasato Archives of Experimental Medicine, Tokyo

December 1919 **3** No 3

*Spirochete of Rat Bite Fever in Japanese Field Mouse R Kobayashi and M Kodama—p 199
*Spirochete Like Bodies in Cultures of Certain Bacteria G Koga and I Otsubo—p 207
Origin of d Lactic Acid in Animal Organism K Taguchi—p 223
Vaccine Treatment and Prophylaxis of Tuberculosis K Shiga—p 239

Spirochete of Rat-Bite Fever in Field Mouse—Kobayashi and Kodama found *Spirochaeta morsus-muris* in 12 and 54 per cent of field voles from two districts Monkeys inoculated with cultures from the mice developed antibodies with spirocheticidal action, but the strains from the two districts behaved differently The article is in English It concludes with the suggestion that this species of field vole, *Microtus montebelli*, may prove useful in research on spirochetes

Bodies Resembling Spirochetes in Cultures of Certain Bacteria—The plates show the spirochete-like bodies as observed in anaerobic cultures of motile bacteria with flagella They seem to be a production of the bacteria themselves or represent the flagella in a certain condition They are readily differentiated from true spirochetes by their staining properties and motility, but the research reported testifies that cultivation of any species of spirochete is not complete until a pure subculture can be obtained (Compare with editorial June 26, 1920, p 1783)

Vaccination Against Tuberculosis—Shiga emphasizes that the only positive prophylaxis against tuberculosis is to attack it before it has induced manifest symptoms In the last four years he has treated 300 tuberculous patients with his T B serovaccine, including twenty of prophylactic vaccination For this he uses dilutions of 1 5000 for five weekly injections, 1 1000 for four injections, 1 500 for three, 1 100 for three and then living avirulent tubercle bacilli 1 20 for two injections The temperature is taken for a week before commencing the course, and if there is fever, the vaccination is begun still more cautiously

Deutsche medizinische Wochenschrift, Berlin

April 8 1920 **46**, No 14 15

Diagnosis of Tuberculosis in Children P Grosser—p 369
*Syncopal Attacks Especially in Children E Stier—p 372
Duodenal Ulcer F Mendel—p 375 To be cont d
Differential Diagnostic Value of Mesenteric and Peritoneal Symptoms in Abdominal Disease D Kulenkampff—p 377
Atypical Findings in Lobar Pneumonia W Robitschek—p 381
Apparent Death and Its Diagnosis G Puppe—p 383
Microscopic Examination of Lungs of Newborn Strassmann—p 385
Sterilization of Women from Eugenic Standpoint Strohmayer—p 387
Toxicology of Eucalyptol and Other Oils J R Spinner—p 389
Acute Isolated Myositis in Voihynian Fever J Bungart—p 391
Abscesses from Traumatic Aneurysms O Orth—p 392
Friedmann's Tuberculosis Treatment Jungmann—p 393
Percentage of Infants in Need of Outside Aid F Rott—p 394
Value of Consultation Service for Venereal Disease Hodann—p 397
Causes of Death in Germany 1914 1916 Prinzing—p 398
Syringe for Injection of Opaque Fluids R Braun—p 399
Capillary Pipet for Obtaining and Forwarding Spirochete Serum J Schereschewsky—p 400
A Shoe Inlay for Flat Foot S Romich—p 400
Present Meaning of Term Constitution J Bauer—p 402
Treatment of Coryza G Finder—p 404

Syncopal Attacks—Stier states that syncopal attacks are to be regarded as the result of abnormally intense oscillations in the blood circulation which rest exclusively on an inherited constitutional inferiority of the neurovascular apparatus Many of these attacks are of purely reflex origin As to the mechanism of the process we may assume that the quick contraction of the cerebral vessels due to emotional disturbances, and the resultant sudden shifting of masses of blood to the internal organs and more especially to the abdominal organs which normally is followed by a dilatation of the cerebral vessels in a syncopal attack become too intense and the dilatation of the cerebral vessels does not occur in time The clinical picture however requires the recognition of certain psychic factors Syncopal attacks seldom occur in children under circumstances that endanger their lives—never on the street when at play or in swimming or the like—but almost always at home when help is near From this fact it is evident that aside from the reflex process in the neurovascular apparatus psychic factors play a decisive part, among which is weakening of the will power or when the surroundings are such that the child feels that he can yield to the strain

Medizinische Klinik, Berlin

March 28 1920 **16** No 13

Blood Examination in Relation to Mental Disease Kafka—p 329
Arthritis Following Intestinal Disease Von Goltzheim—p 331
Influenzal Meningitis (Encephalitis) H Rotky—p 335
*Neo Arsphenamin in Gangrene of Lung and Chronic Bronchitis F Becher—p 336
Auscultatory Phenomena with Patent Ductus Arteriosus W Wendt—p 338
Quinin Derivatives in Treatment of Pyodermias W Friedlander—p 339
Turpentine Poisoning Lodemann—p 340
Effect of Hot Decoctions of Linden Blossoms L Schwartz—p 340

Neo-Arsphenamin in Gangrene of Lung and Chronic Bronchitis—In chronic bronchitis following pneumonia and influenza Becher has found injections of neo arsphenamin (neosalvarsan) successful in two cases One patient had been expectorating profusely for three months He was given two 0 6 gm doses of neo-arsphenamin intravenously The third day following the first injection the daily amount of sputum had increased slightly from 200 to 225 c.c, but then it fell rapidly to 10 c c in two days and in a day or two more had ceased altogether and did not return T patient gained rapidly in weight, and felt and l

better The Wassermann reaction was negative In Case 2 the bronchitis, following influenza had lasted for two months, and the sputum had amounted to 200 c c daily It began to decrease the third day following the first injection of neoarsphenamin, and by the seventh day had dropped to 70 c c, but did not disappear until the twentieth day There were no spirochetes in the sputum and the Wassermann reaction was also negative Becher thinks that it seems indicated to try arsphenamin injections further in similar cases

Munchener medizinische Wochenschrift, Munich

March 26 1920 67, No 13

*Calcification of Arteries J G Monckeberg —p 365
*Tissue Defense A Theilhaber and H Rieger —p 368
Influence of Temperature on the Sachs Georgi Reaction L Hauck —p 369
*Mechanical Irritation in Adams Stokes' Disease F Schott —p 370
Stable Sterile Physiologic Sodium Chlorid Solution Taege —p 371
Floating Disappearing Goiter A Krecke —p 371
Infant Feeding with Spontaneously Soured Milk Klotz —p 372
Arteriovenous Aneurysm Bernard —p 372
Nipple Clip to Prevent Loss of Breast Milk H Hinselmann —p 373
Intravenous Injection of Opaque Fluids W Hoffmann —p 373

Calcification of Arteries—Monckeberg emphasizes that from a pathologic and anatomic standpoint the calcification of the media in arteries of a muscular type is quite distinct from the disease process in atherosclerosis Both processes may, however, occur together, in which case atherosclerosis is grafted on to an existing calcification of the media, but even the advanced stages of calcification commonly show no associated atherosclerosis Since atherosclerosis of the terminal arteries is seldom so severe that the changes in the walls can be palpated through the skin it follows that the clinical finding of an artery with calcium deposits justifies the assumption of calcification of the media and that atherosclerosis may be associated It does not justify the conclusion that atherosclerosis alone is present The more pronounced the findings the more likely it is that only calcification of the media obtains

Tissue Defense—On the basis of investigations and clinical observations, Theilhaber and Rieger believe that atheromatous degeneration of blood vessels is conditioned not only by the kind and quantity of chemical substances in the blood but also by the state of tissue defense If the chemical poisons in the blood do not exist in too large quantities and the tissue defense is still reasonably efficient when a reduction of heart function in advanced years occurs only sclerosis will develop But on the other hand, if the poisons in the blood are very numerous and the tissue defense is defective, atheromatosis will result Sclerosis and atheromatosis in turn open the gates to invasion of the connective tissue by adjacent tissues (epithelium) They also prepare the way for many other diseases such as chronic arthritis They also break down the tissue defense A further important factor which impairs the tissue defense is the reduced activity of the blood-forming organs The spleen bone marrow, thymus, Pever's glands lymph glands etc, atrophy in old age in consequence of the reduced supply of blood circulating through them owing to the weakening of the heart action As a result there is a decrease in the round cell production, in the formation of connective tissue cells, a reduction in the tissue defense and a decrease in the antibodies acting against foreign invaders The meshes of the "filter" that protects the vessel walls against the invasion of toxins in the blood are unduly widened The functioning of the blood-forming organs is impaired also by the sclerosis and atheromatosis of their vessels and thus the vicious circle is established Impaired heart functioning due to old age is thus frequently the primary factor in the syndrome

Mechanical Irritation in Treatment of Adams-Stokes' Disease—Schott states that in attacks of Adams-Stokes disease heart action may sometimes be restored by a rather vigorous slap on the chest over the heart This may be done from five to ten minutes after the onset of the syncope He thinks that possibly patients may thus be tided over the time of gravest danger One blow with the fist may rouse the patient from his stupor or it may require several Two cases are cited

April 16 1920, 67, No 16

Hints on Economical Dieting Kruse and Hintze —p 445
Experiences with the Deycke Much Partial Antigen Treatment of Tuberculosis L Jacob and M Blechschmidt —p 447
*Investigations of the Question of Colds H Schade —p 449
*Tetragenus Sepsis H Ludke —p 454
Clinical Aspects of Erythema Infectiosum C Coerper —p 456
Elastic Steel Wire Artificial Foot J Fuchs —p 457
Adjustable Table for Examination and Treatment of Back T Penzoldt —p 457
Syringe for Intravenous Injection of Opaque Fluids F Heitz —p 458

Investigations of the Question of Colds—Schade recalls that the skin is the main defense and protective organ of the body against the cold but strangely enough we scarcely ever speak of taking cold in the skin although the skin is just the place where disturbances of the tissues due to cold are best recognized The effect of the cold is first seen on the nerves In the vasomotors this is evidenced by the interruption of regular processes, in the sensory nerves a reduction in the specific skin sensations is noticeable "Aside from these changes a general physical alteration of the skin tissue takes place, a fact that in the past has been grossly neglected" He means the stiff and doughy condition of the tissues which is noticeable in the hands and face after staying a short time in the cold air Through the effect of the cold the tissues become harder and less elastic The change that occurs in the skin may be likened to the hardening process of certain jellies when exposed to the cold for in both cases it is the colloids that undergo a change As we learn from recent physiologic and clinical investigations, the changes in the colloids are of the greatest importance from the standpoint of cell functioning Every change in the colloid state causes disturbance of function After the colloidal change becomes permanent it is impossible for the cell to continue to exist in the normal manner There are several manifestations in the clinical course of catarrhal conditions that point to the cold as one of the etiologic factors responsible for these conditions The catarrhal conditions appear frequently within a few hours after exposure to cold When a mucosa is affected, at the beginning of the condition the whole surface is often affected at once, instead of first a small focus appearing, as is the case in ordinary infections

Tetragenus Infection—Lüdke finds in the literature very few cases reported in which a pure infection from *Micrococcus tetragenus* occurred He therefore gives an account of three cases of his own which he thinks justify the conclusion that this species is an independent disease-producing agent Its pathogenicity cannot be very great as all the cases took a favorable course In his three tetragenus cases he used intravenous injections of killed tetragenus cultures or an albuminoid product, which promptly reduced the fever and led to a speedy recovery of the patient In one case he had tried intravenous injections of collargol, but without success

Therapeutische Halbmonatshefte, Berlin

Jan 1 1920 34 No 1

*Rectal and Parenteral Feeding C von Noorden —p 1 Concl in No 2 p 40
*Treatment of Rachitic Curvature of Bones G Magnus —p 4
Pharmacology of Colchicum Treatment of Gout S Loewe —p 5
Practical Suggestions for Out Door Treatment of Tuberculosis Backer and Capelle —p 11

Rectal and Parenteral Feeding—Von Noorden asserts that the best means for artificial feeding is with the duodenal tube When this is not practicable, all that we can hope to get absorbed from a nutrient enema is water, a few salts alcohol of at least 3 per cent concentration, of the carbohydrates only dextrose or better yet dextrin, of nitrogenous food only albumose-peptone or products of far advanced splitting of albumin He advises not more than two enemas of 300 c c each in the twenty-four hours, the patient lying quiet thereafter The rectal tube is introduced for 8 cm and a preceding injection of a little opium twenty or thirty minutes beforehand is advisable By giving the enemas by the drop method up to 2 liters can be given in the twenty-four hours It is better to give the nitrogenous and the carbohydrate ingredients in separate enemas When the rectum

cannot be utilized, sugar can be given subcutaneously or by the vein and does not induce anaphylaxis, like albumin Fat by these routes is not assimilated Cane sugar and milk sugar are eliminated in the urine almost unutilized, dextrose and levulose are the forms to be used By the vein, a 5 or 10 per cent solution can be infused, subcutaneously only the 5 per cent solution This should supplant the old saline infusion as it supplies the needed fluid and nourishment besides It is indicated particularly, instead of saline, in uremia and cholera and can be combined with nutrient enemas When mineral salts are indicated Ringer's solution is preferable to saline but he omits the sodium bicarbonate as this causes turbidity Although the calcium content is minute, yet it may have decisive importance for the heart action He commends especially a combination of Ringer's solution and 10 per cent sugar solution

Treatment of Rachitic Deformity—Magnus utilizes the tendency of an immobilized bone to atrophy and soften This is accomplished by putting the deformed leg in a plaster cast without any attempt at correction The child is then kept in bed for five or six weeks When the cast is then removed, the bone is soft and pliable and can be straightened under general anesthesia as readily as a wax candle Another plaster cast is then applied for a second six weeks but weight bearing is now indispensable to overcome the tendency to atrophy It should be begun by the third week His results in thirty cases were highly satisfactory, usually both legs were treated at the same time In one child the femur fractured and had not quite healed so that a cast was necessary for an additional three weeks There has been no recurrence of the deformity in any case The cast reached to the ischium when merely the legs were in question, but with the thigh, the pelvis was included

Zentralblatt fur Chirurgie, Leipzig

April 17 1920 **47**, No 16

Access to Pretracheal Space by Epiperio teal Sternum Flap L Druner—p 370
Incarceration of Stomach in Femoral Hernia R Spiegel—p 378
Incarceration of Fallopian Tube in Inguinal Hernia B Vas—p 374

Retrograde Incarceration of Fallopian Tube in Hernia—Vas states that he finds only one other case similar to his case in the literature (Maydl) The girl of 16 had long had a right reducible inguinal hernia It suddenly became larger and painful, and the operation revealed in the sac a livid loop-shaped object about 11 cm long and 2 cm thick which proved to be the right fallopian tube It had looped down into the incarceration ring while its free end still lay in the abdominal cavity and was bluish black. Prompt recovery followed excision of tube and ovary

April 24 1920 **47**, No 17

*Separation of Lower Epiphysis of Femur A Fromme—p 394
Preparatory Measures for Tendon Grafting K Henschen—p 396

Traumatic Separation of Lower Epiphysis of Femur—In Fromme's three cases of traumatic separation of the lower epiphysis of the femur in two boys of 9 and 12 and in a girl of 12, in spite of extensive exposure of the lesion it was impossible in any case to secure an ideal reduction or if perfect reduction was secured it proved impossible to retain the limb in the corrected position although it was put up in flexion in a plaster-of-Paris cast In every instance forward displacement of the epiphysis occurred After the healing process in this faulty position had taken place no normal movements of the knee joint were possible for several months Not only flexion was prevented by bony growth but also extension was impossible but four or five years later, he was somewhat surprised to find that by the process of growth an excellent functional adaptation had been finally brought about, so that the practical results were almost perfect In one case extension was only 5 degrees and in two cases flexion was only 10 degrees less than normal Almost normal motility had been effected by the gradual reconstruction of the lower end of the femur Only in one case had slight shortening (1 cm) occurred

Zentralblatt fur Gynakologie, Leipzig

April 17 1920 **44** No 16

Technic for Closure of Ureter W Poten—p 393
When Is It Safe to Leave Extravasated Blood from Tubal Abortion? A Mueller—p 395
*Reinfusion of Extravasated Blood D Kulenkampff—p 396 Idem M Friedemann—p 398
Etiology of Postoperative Parotitis H Friedrich—p 400

April 24 1920 **44** No 17

Leukorrhea Its Origin and Treatment A Loeser—p 417
Indications with Retention of the Placenta Lindig—p 430
Maceration of a Living Child Meyer Ruegg—p 431
Lamellar Desquamation in the Newborn H Brauns—p 435

Reinfusion of the Blood with Tubal Abortion or Rupture of the Spleen—Kulenkampff proceeds to reinfusion of the extravasated blood at once and has had no mishaps in the two cases of ruptured spleen and nine of tubal abortion in which he restored to the system the blood lost in this way, and he knows of thirty-five other cases on record In a twelfth case he found that the blood had coagulated The harmlessness of puncture has been demonstrated by the pneumoperitoneum technic and he punctures the abdominal wall in the lower third of the rectus muscle and aspirates to confirm the presence of fluid blood The infusion tube is introduced into the vein by the assistant as the abdomen is being opened The parietal peritoneum is then drawn up into a cone and the blood around the bladder runs out From ½ to 1 liter of fluid blood is thus secured in a few minutes, strained citrated and poured into the infusion funnel

Reinfusion of Blood with Tubal Abortion—Friedemann in critical cases, immediately exposes the vein and infuses physiologic sodium chlorid solution by the drop method When the abdomen has been opened and the bleeding artery clamped, the extravasated blood is scooped up and citrated with a 3 per cent solution of sodium citrate in the proportion of 9 1 Then the citrated blood is added to the saline and the mixture is infused as needed, but always very slowly When the blood has all been used he occasionally continues with pure saline He has been using this technic for several years and has never noted any signs of intoxication with it

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

Nov 29 1919 **2**, No 22

Model Procedure for Medical Examinations G van Rijnberk—p 1697
*Traumatic Neuroses T van Schelven—p 1703
Dysentery and Bilharziasis in Surinam and the Action of Emetin C Bonne—p 1718

Traumatic Neuroses—Van Schelven's article is the outcome of study of 4 000 cases of traumatic neurosis in Austro-Hungarian soldiers He protests against the term as misleading, as the neurosis is not the result of the physical trauma but of the mental reaction to it The subject is well posted in regard to his sufferings, and they always subside sooner or later when the matter of compensation is finally adjusted The best form of compensation for a traumatic neurosis, he says is a pension, not too large, progressively declining and automatically stopping at the end of the second year without appeal

Feb 7 1920 **1** No 6

Clinical Study of Typhus P H Kramer—p 455
*Determination of Urea Content of Blood R Bahlmann—p 473

Urease Test for Urea in the Blood—Bahlmann gives an illustration of the set of connected test tubes and wash bottles with which he applies the urease test for determination of the urea content of minute quantities of blood It is a simplified soy bean ferment micromethod His parallel tabulated findings apparently demonstrate that the method is reliable

March 27 1920 **1** No 13

*Signs of Calcium Deficit H A Stheeman and A F W Arntzenius—p 1030
Ideals of School Inspection M van der Heeve and others—p 1039
*Psychogalvanic Reflex Phenomena A A Grunbaum—p 1044

The Stigma of Calcium Deficit.—Stheeman is chief of the children's hospital at s Gravenhage and extensive experience has convinced pathologic conditions have the inadequate reserve of calcium

underlying cause responsible for spasmophilia, for the habitus asthenicus, universal asthenia and allied conditions That this fact has not been fully appreciated before is due to the lack of a simple and reliable quantitative test for the calcium content of the blood Wright's method reveals only the calcium that is dissolved, and there is no standard for comparison between the findings by different workers The De Waard method of microtitration with one-hundredth normal solution of potassium permanganate gives reliable findings with as little as 0 5 or 1 c c of blood or serum. (It was described in detail in the *Nederlandsch Tijdschrift voor Geneeskunde* 2 992, 1918) The findings in the blood serum of thirty-five sick children and in a number of healthy children and a few sick and healthy adults are tabulated In the fifty eight healthy children the calcium content was constantly between 12 and 13 mg per 100 c c of serum In the others it ranged from 8 25 to 17 mg The age does not seem to influence the calcium content, but an extremely low figure was found in the prerachitic condition, with intestinal infantilism, neuroses of the vegetative nervous system, universal asthenia, and tuberculosis The severity of the pathologic condition was reflected in the lowness of the calcium content, and the figure rose as the general condition improved A further proof of his theory is the prompt benefit in all these pathologic conditions when treatment aiming to promote retention of calcium, namely with cod liver oil and phosphorus, was systematically given To estimate the improvement he does not trust to personal impressions but measures it with precision by testing the sensitiveness of the peripheral nerves to the galvanic current This has confirmed that the Erb sign is nearly always positive with a low calcium content and is never positive with a high content (aside from rachitis) Also that the Erb sign is most pronounced the greater the deficit in calcium and that as the Erb sign becomes less pronounced, the calcium content is also found to be increasing It seems thus beyond question, he concludes that the cause is a local calciprivic condition of the nerve tissue, at least in the peripheral neuron as a part of a general deficit of calcium in the tissues It conforms to Quest's and McCallum's findings in dogs, and to the Chvostek sign in children The latter he regards as a more sensitive sign than the Erb reaction

Psychogalvanic Reflex Phenomena — Grunbaum's thirty-page article is a critical review of recent literature on the galvanometric measurement of mental processes and emotive physiological changes He is privat-docent of physiology at the University of Amsterdam and his conclusions are against the acceptance of psychogalvanic reflex phenomena as a reliable element in the diagnosis

Hospitalstidende, Copenhagen

April 28 1920 **63** No 17

*The Duodenal Tube with Gallstones A Tvilstegaard —p 257 Conc n

Duodenal Findings with Gallstones —Tvilstegaard found leukocytes in the duodenal content in 10 cases of cholecystitis On the other hand he never found leukocytes in the duodenal content from healthy persons The duodenal content resembled macroscopically microscopically and bacteriologically the contents obtained from the gallbladder at the operation In four of the five cases in which the colon bacillus was found in the duodenum it was present also in the gallbladder Injection of a solution of peptone into the duodenum is said to induce contraction of the gallbladder, and the outflow of bile is modified In some cases he noted that the bile thereafter became thick and dark colored but this cannot be ascribed to contraction of the gallbladder alone, as in one of the cases the gallbladder was completely destroyed and unable to contract In some other cases although the gallbladder seemed to be functionally capable, yet no effect from the peptone was apparent Investigation of the duodenal content is instructive for differentiation of disease of the biliary apparatus from kidney disease and appendicitis in puzzling cases Considerable literature is appended He has applied the method in 18 cases and gives the details of 11 cases in which the findings were confirmed by an operation

Hygiea, Stockholm

April 15 1920 **82**, No 7

Injury of Ureters During Operations on Pelvis W Forssell —p 209 Idem F Westermark —p 217
*Hypernephroma E Michaelsson —p 220

Results of Operative Treatment of Hypernephroma — Michaëlsson relates that of the 30 patients with hypernephroma given operative treatment at the Serafimer Hospital between 1896 and 1915, 7 are still in good health after intervals of over 15 12, 9, 7 and 4 years, 6 died from recurrence or metastasis within three years and 3 others in from four to ten years All the others died from intercurrent disease but there probably was metastasis in some of them It is difficult to base the prognosis on the microscopic findings in the tumor, even those that do not indicate malignancy under the microscope may develop metastases

Ugeskrift for Læger, Copenhagen

April 8 1920 **82**, No 15

Immunity after Influenza J Buchholtz —p 486
Vaccination against Influenzal Pneumonia J Buchholtz —p 488

April 15 1920 **82** No 16

*Etiology of Chronic Gastric Achylia K Faber —p 505
*Polycythemia T F Hess Thaysen —p 514 Begun in No 15 p 473
*Cyst in the Brain A V Neel —p 524

Etiology of Chronic Gastric Achylia —Faber presents evidence to disprove the assumption of a congenital achylia and to demonstrate that in the majority of cases the nonfunctioning of the gastric glands is the result of toxic injury from endogenous toxins in the course of acute or chronic diseases or from gastro-intestinal infectious processes, or from irritation from insufficiently masticated food The direct hematogenous toxic action in typhoid and dysentery, entailing achylia was abundantly proved during the war. In bacillary dysentery there is frequently a toxic bradycardia In children achylia of toxic origin is common, but it is usually transient, in adults irreparable injury may result At all ages the achylia may develop without causing symptoms While the toxic action responsible for it is transient the glands may be damaged for life As the condition is proving to be so much more common than formerly supposed its occurrence in several members of a family cannot be accepted as indicating a congenital, familial condition, at least from the evidence hitherto presented

The Capillaries in Polycythemia with Enlarged Spleen — Thaysen says that if the erythrocytes were counted systematically over long periods in cases of polycythemia remarkable fluctuations in the count might be found, as in the case here reported in detail His patient was a woman of 54 and the erythrocytes ran up from 7 7 millions to 11 8 millions in the course of six weeks, but this was followed by a still more sudden drop to 7 2 millions in three and a half weeks In the course of twelve hours the figure ran up from 5 3 to 10 6 millions on one occasion His investigations and tests showed that the fluctuations were caused by varying contraction and dilatation of the capillaries, and precapillaries of the skin The vasomotor system is evidently in a very unstable state which might be called actual vasomotor or capillary ataxia This suggests the possibility of suprarenal insufficiency as an element in the clinical picture There is one case on record of associated Addison's disease and polycythemia In polycythemia there is usually a tendency to muscular weakness and pigmentation Guggenheimer has reported two cases of eunuchoidism plus polycythemia Thaysen adds that the experiences with roentgen treatment have been conflicting Vaquez noted general improvement but no action on the erythrocyte count, while McCray thinks it is the only dependable treatment, and Engelhardt and Brown denounce it as ineffectual Rydgaard has published a favorable report and Thaysen's own patient seemed to improve after the first two exposures, but later no effect was apparent

Cyst in the Brain —The apparently healthy woman of 76 developed severe chorea following a fright The chorea was ascribed to hysteria but it persisted with progressive dementia Necropsy the third year revealed an old subdural cyst behind a depression in the frontal bone from a fall

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PRINCIPLES OF PERIPHERAL NERVE SURGERY *

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CHICAGO

Notwithstanding the amount of experimental work that has been done on peripheral nerves, there is still some difference of opinion among investigators as to their method of repair after injury or division The complex histology of the nerve fiber and the many different processes occurring or progressing simultaneously in both segments of a divided nerve offer many opportunities for widely different interpretation of findings If the essential features of nerve repair are understood, the factors that interfere with it can be easily determined by experimental studies or the examination of tissues removed at operation Therefore, before discussing the principles of peripheral nerve surgery, I will consider the regeneration of peripheral nerves after division

REGENERATION AFTER DIVISION

When a nerve is divided, definite evidences of regeneration are noted within a few hours in the proximal segment adjacent to the point of injury Some of these early changes are undoubtedly abortive, but others indicate attempts at definitive repair Some degenerative changes occur in the neuraxes in the distal end of the proximal segment These do not, however, extend far back in the nerve, probably only to the next node of Ranvier

Definitive regeneration of neuraxes occurs only in the proximal segment, and all the neuraxes that eventually neurotize the distal segment passing into the motor end plates and sensory endings develop from those of the proximal segment By the eighth day after division of a nerve, the medullated fibers of the proximal segment have given off numerous lateral rami some 5 mm above the point of section These grow distad beneath the old neurilemmal sheath The nonmedullated fibers also dissociate into bundles of neurofibrillae which grow down in the old sheaths by the fourteenth day In studying the repair of nerves through a gap, it can be positively demonstrated that no neurofibrillae can be found in the distal segment until those developing from the proximal segment have bridged the gap Some still ardently defend the theory of peripheral regeneration of nerves, but all recent evidence shows that the theory of peripheral regeneration is based on studies made when specific stains were not in use or on experiments which were imperfectly or insufficiently controlled

The changes that occur in the distal segment after division are equally important to those occurring in the proximal Nerve impulses cannot be transmitted without neuraxes, but the neuraxes cannot reach their terminal distribution unless bands or conduits are formed along which these can pass or creep Both degenerative and regenerative changes occur in the distal segment after division The neuraxes soon become broken up Often they seem to have snapped Later they break up into fine granules The myelin breaks up into balls and globules While these degenerative changes are occurring in the neuraxes and myelin sheaths, definite evidences of growth or repair are noted in the sheath cells The adult neurilemmal sheath (Schwann) is a fine, thin, structureless membrane provided with a few fusiform nuclei—one to each node of Ranvier, the latter varying from 80 to 900 microns in length

After division, the sheath cells of both the proximal and distal segments bordering on the traumatized area react early The first indication of a growth change is indicated by a slight increase in the granular cytoplasm surrounding the nuclei of the sheath cells This change is observed within from twenty-four to thirty-six hours after division in the cells immediately adjacent to the zone of injury The cytoplasm increases rapidly in amount, the nuclei undergo mitosis, and by the fourth to the sixth day definite protoplasmic bands have formed These are narrow strands or bands of protoplasm which contain hyperchromatic nuclei This growth change, leading to the formation of protoplasmic bands, occurs throughout the distal segment Certain factors, probably traumatic, greatly accelerate the process in those sheaths bordering on the line of division The fully formed protoplasmic bands appear later in the peripheral parts of the distal segment than in those adjacent to the line of division

These bands evidently play an important role in nerve regeneration, for the fibers which have no neurilemmal sheaths, such as those of the optic nerve and spinal cord, do not regenerate after division Kirk and Lewis, in studying regeneration of peripheral nerves after fascial tubulization, could demonstrate these bands passing through and bridging the gap They seemed to precede the developing neuraxes, forming pathways, as it were, for these as they developed The neuraxes—the conducting portion of the nerve fiber—develop only from the proximal segment after division of a nerve The changes in the neurilemmal sheath which occur throughout the distal segment and in the distal part of the proximal segment adjacent to the line of division—the so-called wallerian degeneration—are, however, essential to the definit

* Chairman s address read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association, New Orlean April 1920

tion of the nerve, for without protoplasmic bands, which develop as a result of regenerative changes in the sheath cells, the developing neuraxes do not reach their terminal connections

HARMFUL EFFECTS OF SCAR TISSUE

In the repair of a divided nerve, the first consideration is to provide easy access for the developing neuraxes to the distal segment After division of a nerve, a neuroma will develop within nineteen days Even when there has been no hemorrhage or infection a neuroma develops The cut fibers retract within the epineural sheath, and a connective tissue cap forms over the end of the nerve There is, however, a very marked attempt at repair, for the developing neuraxes as they reach the connective tissue, formed by the cells of the endoneurium and perineurium and surrounding tissues, turn back on themselves to form the spirals described by Perroncito The neuromas which invariably form after division of a nerve, as demonstrated by Huber and Lewis, are indicative of an attempt at repair which has been thwarted by scar tissue Some of the developing neuraxes may undoubtedly zigzag through scar tissue and reach the distal segment, but it is doubtful whether they will reach the terminal connections to which they were originally destined

Scar tissue forming after division of a nerve interferes most seriously with nerve repair There has been a tendency of late to advise suture by neuroma There will be but few successes when such a procedure is attempted In all cases the neuroma should be resected until healthy funiculi appear and to the point where scar tissue is not visible to the naked eye In many instances even after the neuroma has been resected far back, the funiculi will have a peculiar matted, gelatinous appearance This appearance is due to small amounts of young connective tissue, developing neuraxes and some edema The results which have been obtained after suture would seem to indicate that successful nerve repair may be obtained when end-to-end suture is made between funiculi having this appearance

In examining some neuromas which were resected when suture has been performed, connective tissue septums which equal in diameter the funiculi have been found In such instances, it would have been easy to approximate funiculi of the distal segment with connective tissue septums of the proximal segment, thus preventing or seriously interfering with nerve repair I believe it advisable in many cases to employ frozen sections to determine the level to which the resection of neuroma should be carried Mobilization of the nerve segments and preparation of the nerve ends followed by accurate adjustment require some time, and the frozen sections could be easily made and studied while these procedures were being carried out

NECESSITY OF PRESERVING THE NERVE PATTERN

Success in peripheral nerve repair depends on accurate anatomic approximation of the two ends The importance of the internal topography of peripheral nerves should be emphasized Stoffel has insisted that the funiculi in a mixed nerve have a fairly definite position and that the sensory and motor funiculi, which serve different muscles, maintain their position and relation throughout the entire course of the nerve He is probably incorrect in the belief that the funiculi maintain a fairly definite relationship throughout the entire length of the nerve, for Langley has demonstrated in peripheral nerves an internal plexus The internal plexuses apparently serve to collect together the afferent and efferent fibers of the different nerve roots for the areas supplied by the peripheral nerves, just as the brachial and lumbosacral plexuses do for the large areas supplied by the nerve trunks In the region between the origin of two successive nerves, not arising close together, the bundles are arranged in groups which have little or no connection with one another, although the bundles forming the group are more or less interconnected Such a region is called an intermediate region, but it gradually blends with the region in which is found the plexus which is formed by the interlacing of fibers or bundles given off from the nerves or bundles of the intermediate zone Langley's work agrees with that of Dustin, who described an interlacing of nerves or bundles between the funiculi of peripheral nerves at points where branches are given off

As far as the surgery of peripheral nerves is concerned, Stoffel's and Langley's work, although differing in detail, emphasizes the importance of nonaxial rotation of nerve trunks during suture, thus avoiding distortion of the nerve pattern Distortion of the nerve pattern may interfere seriously with the nerve supply of muscles If the nerve pattern is distorted, reeducation of muscles or readjustment becomes necessary If the nerve pattern is distorted, the developing neuraxes may not reach the muscles for which they were originally intended, or neuraxes which originally served motor function may be diverted to the skin In some instances after suture, even when care is exercised, the neuraxes may make proper functional nerve endings, but the central connections may be different from those existing before the suture was performed In such instances a readjustment of impulses or a degeneration of these fibers must occur before coordinated movements can be made

I have attempted without any great success to perform funicular suture This is the object to be desired, but I believe it impossible As perfect anatomic repair as is possible should, however, be secured in order to preserve the nerve pattern The surgeon who makes the most perfect anatomic repair will, other things being equal, have the greatest number of successes

It is often difficult to determine whether or not rotation has occurred or the amount of rotation, if such has occurred This is especially true when the nerve has been divided by a missile, for the nerve after division may be rotated or displaced by the force continuing to act When the nerve is exposed, fine silk sutures may be inserted on both sides of the nerve before it is lifted from its bed These serve as guides to determine the exact position of the nerve segment when suture is attempted Mosquito forceps may be used for the same purpose, but they are not so easily handled and may cause more injury to the nerve

If, after suture, fibers originally destined for a certain group of muscles become partly distributed to their own group and partly to those of another group, marked incoordination of movements may occur The movements are then no longer precise They are awkward and without force This is often seen after suture of the radial nerve, when the supinator longus contracts more forcibly when attempts are made to use the extensors of the wrist, than when the forearm is flexed on the arm In this instance some of the fibers which

should have been distributed to the radial extensors have reached the supinator longus

Accurate approximation will prevent to a great extent this imperfect redistribution of developing neuraxes An imperfect redistribution occurs to some slight extent after every suture, but the results are overcome by reeducation or some degeneration of the fibers which have made wrong terminal connections

IMPORTANCE OF EARLY SUTURE

The length of time intervening between the division of the nerve and repair is the third important factor in determining the success of nerve suture Those cases in which nerve suture is performed early, in which the period between the injury and the operation does not exceed three or three and one-half months, have a much higher percentage of recoveries than those in which the suture is performed later Some time ago I reviewed the statistics of nerve suture, and it seemed to me that suture performed as late as nine months after the injury presented a much lower percentage of recoveries than suture performed earlier

I have had the opportunity of observing eleven cases in which primary suture was performed Nine months after suture, nine of these presented definite evidence of return of motor function These cases could be spoken of as cured The importance of the time element cannot be emphasized too strongly, for there is a tendency in civil practice to delay operation in hopes that improvement may occur if massage, electricity, etc , are continued long and faithfully Supplementary movements which are not dependent on regeneration of the injured nerve are often regarded as evidences of recovery These movements should be carefully studied, for operative interference should not be delayed because of the mistake of interpreting these movements as evidence of return of function in the paralyzed group of muscles Early exploration is advisable in many of these cases, for the secondary changes occurring in the nerve often render suture difficult after a delay of many months, and the changes which occur in the muscles, tendons and joints may cause more or less permanent disability

END-TO-END SUTURE

I have wished to emphasize the harmful influence of scar tissue on nerve regeneration, the necessity of preserving the nerve pattern, and the importance of early suture These are important things in peripheral nerve surgery The method of applying the suture in end-to-end anastomosis is simple

End-to-end suture is the only procedure that can be relied on to reestablish the continuity and function of a nerve after division It makes no difference concerning the suture material, for fine silk or catgut gives equally favorable results Transfixion sutures do not seem to disturb the nerve pattern, but I believe that epineural sutures are the most satisfactory In cases in which some traction must be exerted, it may be necessary to employ one or more transfixion sutures

The sutures should be applied so that the epineurium is closed, thus preventing straying of neurofibrillae in surrounding tissues The ends should be approximated without pressure It has been advised by some that a small gap be left I believe that this is poor advice, although one can see the reason for it after examining neuromas which have been removed when the suture was performed In some cases the scar tissue surrounding a funiculus equals in diameter the funiculus itself In such cases it might be difficult to avoid approximation of the funiculi in one segment with the scar tissue in the other If a small gap were left it might be easier for the neuraxes to find their way into the protoplasmic bands of the distal segment Resection of the neuroma far enough back to expose healthy neuraxes is necessary if peripheral nerve suture is to be successful

Mobilization of the segments will often permit of end-to-end suture even when the defect is long, especially when combined with displacement of the nerves and change in the position of the part Dissection of a nerve from its bed apparently does not interfere with regeneration, for recovery within the time expected after suture occurs when, for example, the sciatic is dissected out of its bed for considerable distance As one's experience in peripheral nerve surgery increases, the attempts at end-to-end suture even in long defects become more and more successful In the cases in which the defect is so long that end-to-end suture is impossible, many procedures have been suggested No one of these can be depended on to give results

CABLE TRANSPLANTS

Experimentally, auto and homo-cable transplants will conduct neuraxes from the proximal to the distal segments Fascial tubes can also be used with success experimentally

The results obtained by Platt in clinical surgery when these procedures are employed are not encouraging They suggest either that the results obtained experimentally cannot be applied directly to clinical surgery or that our technic is at fault in this work

Platt's conclusions are as follows

1 In eighteen operations in which fascial tubulization combined with autogenous nerve grafts, fascial tubulization alone and autogenous vein tubulization (one case) were used, there was a complete absence of any clinical sign of recovery The shortest period over which observations were made was four months, the longest period twenty-six months

2 Secondary exploration in four cases showed complete silence of the nerve trunk to direct faradic stimulation End-to-end suture was accomplished in all after exsection of the bridged segment

3 At the reexploration operations, partial or complete obliteration of the lumen of the fascial tube was noted

4 In two specimens examined histologically, one, a tubulization alone, showed obliteration of the lumen of the tube by fibrous tissue in which no nerve fibers could be found In the second, a graft and tubulization combined, nerve fibers were present in the center of the obliterated tube eighteen months after the operation There was no sign of continuity between the proximal and distal ends through this strand of nerve fibers

5 The early reexploration of all graft and fascial bridge operations is advisable

In 120 operations I used auto cable transplants twelve times and performed tubulization with fascia six times In none of these has there been recovery, although in two transplantations there has been some slight return of motor power in isolated [illegible]cles The striking thing, however, is [illegible] increase markedly in size

should be explored after a reasonable time as a block to the developing neuraxes may occur at the junction of the transplant and the distal segment Resection and suture at this point might favor the downgrowth of neuraxes and neurotization of the distal segment

PROCEDURE WITH PHYSIOLOGIC INTERRUPTION

The group of nerve injuries in which there is no anatomic division but a physiologic interruption of nerve impulse offers some interesting problems The pathology varies considerably Constricting bands, thickened epineurium, bony callus and cicatricial nodules within the nerve resulting from intraneural hemorrhage and proliferation of intraneural connective tissues are the conditions most frequently found

Not all are agreed as to the procedure to be followed In some cases, however, the indications are well defined Tinel has stated that neurolysis is permissible only when it restores a free, supple nerve, in the interior of which is found no obstacle to regeneration, and that as a whole liberation is ineffective in cases of severe lesion of nerve trunks associated with rupture of the sheath, and the development of scar tissue with the formation of a neuroma In these cases the cicatricial tissue is either permeable to regenerating axis cylinders, in which case intervention is useless, or the obstacle does not permit of the passage of axis cylinders, and an operation such as neurolysis will not make it permeable Neurolysis is of distinct value, but it is sometimes difficult to determine whether or not the results are the direct results of surgical intervention, for many of the patients recover spontaneously The value of the operation cannot be denied, however, in those cases in which paralysis has existed for months and in which a distinct return of motor power occurs within ten days following the operation Nerves which present the least macroscopic change may have the greatest alteration in or suspension of function This is observed especially in those cases in which a number of nerves, some of which have recovered spontaneously, have been affected When the operation is performed it may be found that the nerves presenting the most marked pathologic changes are the ones that have recovered spontaneously

Whether neurolysis or resection is to be performed depends on the appearance and feel of the nerve and the electrical reaction The time element is important in determining the results after neurolysis, that is, the time existing between the injury and the operation Statistics dealing with a large number of nerve injuries compiled by a number of different surgeons indicate the importance of the time element The greatest number of improvements, from 80 to 100 per cent, are noted in cases in which this operation is performed within five months after the injury When the operations were performed eight or nine months after the injury, improvement was noted in but from 30 to 70 per cent In thirty-nine cases in which neurolysis was performed within six months after the injury, improvement was noted in 58 9 per cent, while in 100 cases in which a year had elapsed before the operation, improvement was noted in but 28 per cent Patients operated on ten months or more after injury had the lowest percentage of improvement There is, however, no relation between the amount of improvement and the time at which it begins after this operation, for many of the patients who improve the most are those who begin to improve some time after operation

Endoneurolysis, in which the separate funiculi are exposed and freed of scar tissue, is technically somewhat difficult While there may be no increased disability as the result of such an operation—even some improvement—the end-results are usually not much of an improvement over the condition existing before the operation, for scar tissue tends to reform within the nerve

Neurolysis is frequently combined with capsulectomy —removal of the thickened epineurium—or parallel incision of it Injection of the nerve with a solution of procain, as suggested by Hofmeister, is employed by many now in preference to endoneurolysis

A number of methods have been suggested to prevent the reformation of scar tissue after neurolysis Whenever possible, and it is possible in the majority of cases, the liberated nerves should be placed between uninjured muscles Even in large wounds with a great deal of scar tissue it is possible to displace muscles so that a new bed can be formed for the liberated nerve Liberated nerves should not be placed in contact with cut muscle fibers, for the adhesions which then form may seriously interfere with the conduction of the nerve impulse

Cargile membrane is the next choice Fascia cannot be used for this purpose to advantage, for when placed in contact with scar tissue it becomes invaded by and converted into scar tissue I have reoperated in three cases in which a free fat transplant has been used for neurolysis The fat had disappeared from all, and in the place of the transplant were adhesions These were delicate, but delicate adhesions frequently seriously interfere with nerve conduction

RECOVERY OF FUNCTION

Following suture, nerves recover function in a fairly definite order as regards time The musculocutaneous nerve in the arm recovers rapidly and completely The musculospiral nerve recovers early Distinct return of motor power in the supinator longus and radial extensors of the wrist is frequently observed within five and a half months after suture Seventy per cent of the cases of musculospiral suture present very definite evidences of recovery when followed for some time Favorable results are obtained after suture at almost any level The results are not dependent on whether the nerve is sutured above the clavicle, just above its entrance into the radial groove on the inner side of the arm, or on the outer side of the arm between the supinator longus and brachialis anticus The internal popliteal (tibial portion of the sciatic) comes next in order of frequency and rapidity of recovery A longer time is required for recovery than after suture of the musculospiral Thirty-three per cent or slightly more recover fair function after six months At the end of nine months, 66 per cent may present definite evidences of return of function The median nerve repairs fairly rapidly and comes next in order Contractures of the thumb and index fingers with accompanying joint changes may seriously interfere with complete restoration of function and prolong disability In my experience the external popliteal recovers most slowly after suture Even those patients on whom the suture is performed low down recover slowly A large percentage do, however, recover after some time I have observed one case of external popliteal suture in which return of function (motor) was fairly complete at the end of six months

Peripheral nerves have great regenerative power The procedures that are necessary to the establishment of repair are plainly indicated by clinical and experimental studies and the histologic examination of specimens Changes occurring in muscles and joints which develop during repair unless prevented or corrected will defeat the purpose of the operation Careful and assiduous after-treatment is necessary There should be the closest cooperation between the physiotherapist and the surgeon Nerve injuries occurring in civil practice should be operated on earlier than they are Time is lost waiting for evidences of return of function Secondary changes occurring in the nerve during this time may render the operation difficult, often unsatisfactory, and the changes which occur in the muscles and joints may increase and prolong the disability

Early exploration after nerve injuries with loss of function of the muscles supplied by the nerve affected is advisable, for the condition of the nerve (anatomic division or physiologic interruption) can be determined and steps taken to promote an early return of function Results in nerve surgery grow progressively worse with delay

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CLINICAL EXPERIENCE WITH A STANDARDIZED DRIED AQUEOUS EXTRACT OF DIGITALIS *

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That digitalis to be effective must be given in sufficient dosage to produce demonstrable effects has been well known since the original directions for the use of the drug were given by Withering How far short of these instructions the general profession had fallen is a sad commentary Chiefly through the work of Eggleston,[1] it has been demonstrated that within reasonable limits the amount of digitalis necessary to produce physiologic effects can be calculated on a basis of the patient's weight, and that the administration can be carried on rapidly up to this point Robinson [2] has gone a step farther and has shown that under proper control this calculated amount of digitalis can be given in a single dose and effects obtained in from twenty-four to thirty-six hours that under the ordinary methods of administration would require from five to six days or even longer Those who have witnessed the remarkable effect of a large single dose of digitalis when given to a patient with acute symptoms of heart failure must have been impressed with the great value of rapid digitalization as a time saver to the patient and to the clinic

In order to give digitalis properly and especially rapidly, it is essential that the potency of the preparation in use be known It is to be hoped that soon physicians generally will prescribe digitalis in terms of physiologic units, instead of the usual drops, cubic centimeters or grams One immediately encounters the difficulty of obtaining preparations of constant or even known strength Few clinicians have available the material or skill for assaying the drug they must use in so many important cases The Pharmacopeia has set a standard for the minimum activity of acceptable leaf, yet this does not solve the problem entirely, since wide variations in potency are found above this minimum required [3] In spite of this requirement, much of the digitalis on the market today is below standard, while occasional samples are found considerably above the pharmacopeial strength It is further difficult to judge without making actual assays how much the original leaf or the preparation may have deteriorated in strength before the drug comes into the hands of the physician

In an effort to meet this problem, one of us has developed in the laboratories of the Harvard Medical School a preparation which has been used in the treatment of cardiac patients in the medical wards of the Peter Bent Brigham Hospital and in private consultation work for the last year It is a dried, aqueous extract, prepared essentially as follows A 1 per cent infusion is made and filtered and immediately evaporated to dryness over a water bath at a temperature not exceeding 80 C The residue is a fine brown powder that is easily handled It is quite deliquescent, but with care can be kept perfectly dry Each lot is tested for potency by physiologic assay For the most part the frog method has been used, the standard recognized by the Pharmacopeia The powder is mixed with anhydrous sodium sulphate in amounts depending on the strength of the original leaf, never using more than equal parts This in no way detracts from the usefulness of the preparation, and materially aids in preserving dryness It is then made up to weight if necessary with lactose so that 1 gm of the final product represents 1 gm of a leaf of pharmacopeial strength, that is, 0 6 mg per gram of frog weight is just sufficient to cause systolic standstill of the heart in sixty minutes The powder is most conveniently dispensed in capsules of 0 1 gm each The capsules protect the patient from the bitter digitalis taste, and also aid in protecting the powder from moisture, thus contributing to its stability The oldest sample has maintained its activity for a year This gives, then, a stable preparation of constant potency of pharmacopeial standard It should be emphasized that the preparation must be kept dry It has been found that if the extract is allowed to take up moisture, it may show marked deterioration in three months' time

The extract has been given to fifty-five patients under all the varying circumstances seen in the medical wards of a general hospital The results, judged on the basis of digitalis medication in general, have been uniformly satisfactory Whenever practicable for purposes of this study, the patients entering because of symptoms of heart failure were put at absolute rest and given the advantage of all therapeutic procedures excepting digitalis This was withheld until the

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1 Eggleston, Cary Digitalis Dosage Arch Int Med **16** 1 (July) 1915

2 Robinson G C Am J M Sc **159** 121 (Jan) 1920

3 Pratt J H and Morrison Hyman The Activity of American Digitalis J A M A **73** 1606 (Nov 22) 1919

patient seemed to have reached more or less of a level of improvement, or persisting or increasing symptoms made it seem unwise or unfair to withhold the drug longer If it could be definitely ascertained that he had not been receiving digitalis within three weeks or more before coming to the hospital, massive doses, in the majority of instances single doses, of the extract were given It was soon found, by giving divided doses rather rapidly, that 30 mg per kilogram of body weight very closely approximated the dose from which physiologic effects might be expected With those patients to whom it seemed unwise to give large doses because of previous digitalis medication or doubtful histories in this regard, the usual method of giving repeated small doses was employed The usual effect, consisting of gradual slowing of the heart in fibrillating cases, gradual loss of edema, etc , was seen In many instances the total amount of the drug required was larger than the calculated dose In general, the amount in excess seemed to depend on the rapidity of administration Pardee [4] has estimated that with one particular tincture, 1 5 c c of which equaled 1 cat unit, there was a daily elimination or destruction equivalent to 1 5 c c We have not made as yet definite studies with this point in mind That more digitalis is required when given slowly was well illustrated in one patient with auricular fibrillation who had no toxic symptoms and but moderate effect on the heart rate when the calculated dose was given slowly Some weeks later the same amount of digitalis given as a single dose produced not only a marked slowing of the heart, but in addition considerable nausea with vomiting

Case 1 shows very well the typical response to repeated small doses in a patient with auricular fibrillation Here may be seen the gradual slowing of the heart with reduction of the pulse deficit and gradual loss of weight The digitalis was given over a period of six days The calculated physiologic dose would be approximately 2 7 gm He actually received 4 2 gm , which was followed by rather marked nausea and vomiting, indicating that the amount given was somewhat in excess of the optimum dose The effect, as judged by the heart rate, persisted for fully twenty days after the drug was discontinued

Case 2 shows a similar effect, though the administration was not carried to the point of vomiting This patient, also with fibrillation of the auricles, was given 1 gm of the extract during the first twenty-four hours after admission, without a preliminary rest It was then continued in smaller doses over a period of ten days until a total of 4 2 gm had been given During the first five days he received 3 4 gm , 1 1 gm in excess of the calculated dose that would have been expected to be effective if given at once This case illustrates very well an effective method of giving digitalis in practice when the patient is not under constant observation

The records of twelve patients showing fibrillation of the auricles who received effective large doses on a single day were selected as having been sufficiently well controlled to make comparison of value, and because in these patients the changes in heart rate give such good objective evidence of digitalis effect The average total dose varied from 1 4 to 2 2 gm The dose per kilogram of body weight, calculated on the lowest weight of each patient as obtained after the disappearance of edema, varied from 27 to 38 9 mg , with an average of 30 4 mg These results are tabulated herewith Taking 30 mg per kilogram as an average therapeutic dose, it is seen that in this series the variation was slight, within 10 per cent in all cases but one, in which the large dose, 38 9 mg , was approximately 30 per cent above the average

It is of considerable interest to note that while the standardization was originally done by the frog method, the preparation was also tested on cats through the kindness of Dr S A Levine, who found that the minimum lethal dose was 0 095 gm per kilogram of cat weight Converting the foregoing therapeutic dose, 30 mg per kilogram of body weight of patient, to cat units per pound, the Eggleston standard, the value is 0 145 unit Eggleston [1] found in his series an average of 0 146 cat unit per pound and recommends the standard dose of 0 15 unit, the dosage used by Robinson [2] in the series recently reported by him The agreement is especially striking since the standardization of our preparation by the cat method was done late in the course of the observations, and the first use of the value was made in computing these end-results

Case 3 is a good example of a single physiologic dose in auricular fibrillation Here is seen a large pulse deficit completely and persistently eliminated in twenty-four hours The patient came in complaining of nausea, a symptom that did not recur after the digitalis became effective No further digitalis was required while the patient was in the hospital

DOSAGE AND RESULTS IN PATIENTS WITH AURICULAR FIBRILLATION

Patient	Age	Weight Greatest Kg	Weight Lowest Kg	Day of Treatment	Dose Total Gm	Dose Per Kilogram * Gm	Time of Full Effect Hours	Evidences of Effect
J M C	54	73 6	70 4	5th	1 8	0 030	16	Slowing of heart with loss of pulse deficit
W H C	62	74 4	74 0	3d	2 2	0 030	24	Slowing of heart with loss of deficit decreased dyspnea and cyanosis
A W	65	58 0	55 2	3d	1 5	0 027	24	Slowing of heart diuresis
A L M	55	75 6	62 0	2d	1 8	0 029	24	Slowing of heart with almost entire loss of deficit sympto matic improvement
D F K	52	69 8	67 8	1st	2 0	0 029	16	Slowing of heart in spite of fever
A M M	44	60 6	57 4	5th	1.8	0 030	20	Slowing of heart later died of mesenteric thrombosis
G J F	18	52 2	47 0	36th	1 4	0 030	28	Slowing of heart loss of deficit nausea
T F B	55	68 2	65 2	3d	2 1	0 032	16	Slowing of heart decreased deficit lessened dyspnea nausea increased vital capacity
M A D	57	55 4	46 2	3d	1 8	0 0389	24	Slowing of heart loss of deficit no nausea symptomatic improvement
M	56	58 4	57 0	4th	1 8	0 0315	24	Slowing of heart decreased deficit symptomatic improvement
F	29	57 0	52 3	5th	1 5	0 029	10	Slowing of heart diminished deficit marked increase in vital capacity
T F B †	55	70 0	6.0	3d	2 0	0 030	6	Slowing of heart symptomatic improvement

* Calculated on basis of lowest weight

† Second admission effect less permanent at this time

[1] Pardee H E B Notes on Digitalis Medication J A M A 1822 (Dec 13) 1919

Case 4 shows a similar effect, but illustrates the rapidity of action Here an initial slowing is seen in four hours, and complete elimination of deficit in twelve hours

While in no condition is the effect on the pulse rate so strikingly seen as in patients with auricular fibrillation when after a single physiologic dose initial slowing may be seen in from three to six hours and maximum slowing within twenty-four hours, still there is little doubt in the minds of most clinicians that much good can be expected from proper dosage in patients showing regular rhythm when their symptoms are evidence of heart failure We have had the opportunity of giving large doses of digitalis to a number of patients with regular hearts, using the same basis for calculation as in the cases mentioned above In many the effects were quite as gratifying as in those showing auricular fibrillation The average dose was the same

This raises the question of evidence by which one may judge the beneficial effect of digitalis therapy In patients with fibrillation of the auricles a marked slowing of the heart rate, especially the rate as counted by the stethoscope, and the reduction of the pulse deficit is one of the most striking phenomena in clinical medicine When the rhythm is regular, however, marked slowing is not to be expected, and frequently the rate remains but little changed In these patients an increase in the pulse pressure, due chiefly to a lowering of the diastolic pressure, is characteristic during the height of the digitalis effect, but is frequently temporary

That patients may show a spontaneous diuresis on being put at rest is frequently noted It is, therefore, occasionally difficult to be sure just what part digitalis plays in this increase in fluid elimination Many times, however, the diuresis follows the administration of digitalis in so evident a manner that little doubt can be felt as to the stimulus given by the drug At times a profuse diuresis may start within six hours after giving the full single dose of digitalis, as was well illustrated in Case 5 Here the digitalis was given at 10 30 a m The diuresis began late in the afternoon and continued throughout the night, so that the patient was voiding practically every half hour With or without a diuresis the patients may show other evidence of rapid improvement, such as lessened dyspnea, improved color, ability to sleep, and generally increased comfort The electrocardiograph will practically always show the effects of sufficient dosage of digitalis within twenty-four hours or less The chief evidences of this are the well known increase in P-R time and changes in the form of the T waves

There is one evidence of cardiac efficiency on which we wish to lay especial stress, and that is changes in the vital capacity of the lungs Peabody [6] and McClure and Peabody [7] have shown that in patients with symptoms of heart failure the vital capacity may be greatly reduced, that from a mechanical standpoint, dyspnea seems to be due to the inability of the patient to take in sufficient volumes of air to meet his physiologic requirements without considerable effort As it has been expressed, his "pulmonary reserve" is reduced Making allowance for age, sex, height and anatomic defects, changes in the vital capacity, especially changes seen in the same individual from time to time, give perhaps the most sensitive objective measure of the circulatory condition, and especially in regard to the tendency to dyspnea Lowering of the vital capacity has frequently been observed to precede obvious symptoms of cardiac failure On the other hand, as the patient improves, a corresponding increase in the vital capacity may be expected This test has proved of considerable value in judging the effects of digitalis, especially in those patients with regular rhythm when the heart rate changes are slight Increases of as much as from 400 to 500 c c, or from 15 to 20 per cent, have been seen in a number of instances in the first twenty-four hours after the physiologic dose, while the records during the preliminary rest period may show but little variation Illustrations of prompt increase in the vital capacity are seen in Cases 5, 6 and 7 Conversely, it is felt that if the vital capacity is low and does not increase during treatment, the prognosis for recovery is poor This is illustrated in Case 8, in which in spite of a satisfactory and prompt effect on the heart rate, the vital capacity remained low and the patient was but little improved It was necessary to transfer her to a hospital for chronic cases for continued care

That any active digitalis will produce nausea and vomiting by its effects on the central nervous system, if pushed but slightly beyond the maximal therapeutic point, is well known Consequently, no claim is made as to the freedom from toxicity of this preparation When large doses of digitalis are being used, occasional symptoms of this character are to be expected, for without doubt there is some individual variation in susceptibility to digitalis While the effects of toxic doses are distressing to the patient and to be avoided if possible, really dangerous symptoms are not seen if one knows the strength of his preparation and uses ordinary judgment

That not all patients with heart failure will be obviously benefited by digitalis is admitted These fall roughly into two groups (1) those in whom the cardiac condition has progressed beyond the point at which they can be truly benefited by any therapeutic procedure, and (2) those with cardiac lesions, but in whom because of rest and other therapeutic measures all symptoms of failure have disappeared A third group, perhaps, should be added including certain patients in whom the effectiveness of digitalis cannot be demonstrated but who respond to rest prolonged for weeks or months It is true, however, that in patients with auricular fibrillation, digitalis is of service in maintaining a slow heart rate and thus aiding greatly in protecting the patient from a recurrence of symptoms

Case 9 is a record of a patient with a regular heart who, as a result of rest in bed, Karrel diet, etc, had lost practically all her symptoms, one of the most conspicuous of which was a distressing cough Her vital capacity had increased in thirteen days from 1,725 to 2,400 c c On her thirteenth day in the hospital she was given the calculated dose for her weight, 1 7 gm of the extract In this instance nausea and vomiting were produced, the nausea persisting for two days During this period there was actually a fall in the vital capacity, which gradually returned to the previous highest point It is of interest to note that at the height of the digitalis effect the heart rate at one time was 48 per minute, though there was no evidence of

5 Christian H A Digitalis Therapy Satisfactory Effects in Cardiac Cases with Regular Pulse Rate Am J M Sc **157** 593 (May) 1919
6 Peabody F W Cardiac Dyspnea Am J M Sc **155** 100 (Jan) 1918
7 McClure C W, and Peabody F W Relation of Vital Capacity of Lungs to Clinical Condition of Patients with Heart Disease J A M A **69** 1954 (Dec 8) 1917

dissociation No direct benefit from the digitalis could be observed

Case 10 is a similar record of a patient with auricular fibrillation and hypertension While entering with considerable edema and some dyspnea, these symptoms disappeared with rest and other treatment It is to be noted that the pulse was originally slow without deficit He had a marked diuresis beginning on the sixth day

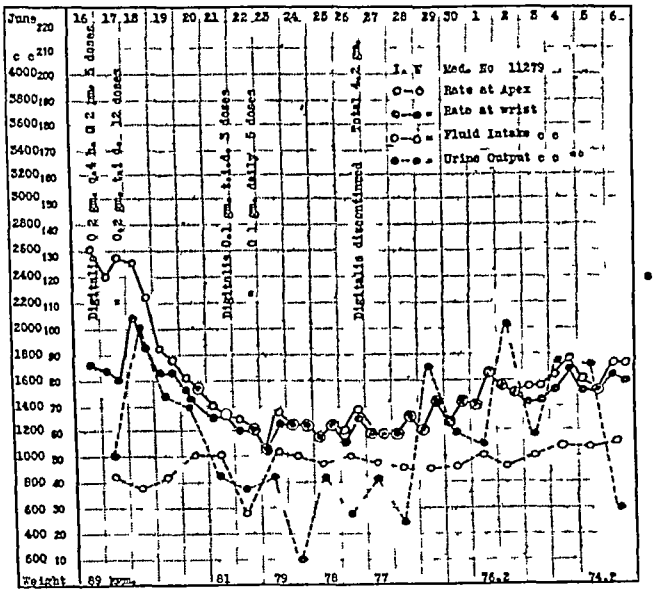

Chart 2—Effect of digitalis in Case 2

n the thirteenth day he was given 2 gm of digitalis, and the calculated dose was completed on the fourteenth day, making a total of 2 4 gm There was an initial fall in the systolic blood pressure and a more persistent lowering of the diastolic pressure Objectively there was no marked improvement in the patient's general condition, though the vital capacity was increased by 200 c c during the next four days

These cases are reported, not to detract from the value placed on digitalis as a great therapeutic agent, but to emphasize the point that it should be expected to show its usual beneficent effect only when the patient has symptoms due to heart failure in the broad meaning of the term

In practice, in order to avoid the nausea that occasionally follows large doses of digitalis, it is well to give at the first administration—if the patient has not had digitalis within two weeks—0 4 gm less than the calculated dose If in twenty-four hours satisfactory results have not been obtained, the remainder can be given Another method of value is to give at the first administration from 0 4 to 0 6 gm less than the calculated dose, and then after twenty-four hours to give 0 2 gm every six hours until indications for discontinuing the drug are seen Occasionally somewhat more than the calculated amount will be necessary Eggleston [8] has recently discussed the use of digitalis in large doses in detail

CASE ABSTRACTS

CASE 2 (Med No 11279 Chart 2) —A Russian Jew aged 53 admitted, June 16, 1919 with the diagnosis of chronic myocarditis auricular fibrillation tabes dorsalis and syphilis complained of shortness of breath He spoke little English and details of the history are incomplete He had apparently had no previous cardiac symptoms The present illness began five weeks before with dyspnea, and he had to stop work three weeks before coming to the hospital Since then he had been orthopneic, and one week before admission his feet began to swell The pupils were irregular, of unequal size, and fixed to light The deep reflexes were all absent The heart was markedly enlarged and absolutely irregular There was definite but not extreme Cheyne-Stokes respiration There was evidence of fluid at the bases of the lungs and considerable edema of the feet and legs The liver was somewhat tender The blood pressure was systolic, 128, diastolic, 84 An electrocardiogram revealed auricular fibrillation and left ventricular preponderance The Wassermann reaction was *positive in the blood and spinal fluid* in which there was also pleocytosis of 46 cells and a positive globulin test The weight on admission was 89 kg The lowest weight was 74 2 kg

On the day of admission, 0 2 gm of the extract of digitalis was given every four hours for five doses This was followed by 0.2 gm three times daily for twelve doses 0 1 gm three times daily for three doses, and 0 1 gm daily for five doses making a total of 4 2 gm in eleven days The calculated dose on the basis of lowest weight was 2 2 gm

The patient showed a gradual but steady improvement, with disappearance of dyspnea and loss of weight The pulse deficit had disappeared on the fifth day

CASE 3 (Med No 12711, Chart 3) —An American clerk, aged 54 admitted Jan 13 1920, with the diagnosis of chronic myocarditis and auricular fibrillation had first entered the hospital in February, 1919 complaining of shortness of breath He had had occasional attacks of rheumatism when a boy and frequent tonsillitis He was refused life insurance thirty years before because of a "leaky heart" A year previous to his first entrance he began to suffer from dyspnea, which increased particularly after he had influenza He also developed edema He had short attacks of precordial pain—not altogether typical of angina pectoris The heart was enlarged and absolutely irregular There was moderate edema of the extremities and Cheyne-Stokes respiration He left the hospital feeling very well and had been taking digitalis in small doses until one month before the second admission He had worked in a postoffice up to this time (one month before) when he stopped work because of loss of strength and nocturnal dyspnea He was also troubled with nausea and vomiting, which he attributed to digitalis, and he had not taken any for the preceding four weeks, though the nausea had continued

On admission he was able to lie flat in bed, but there was definite periodicity in his breathing The heart was enlarged

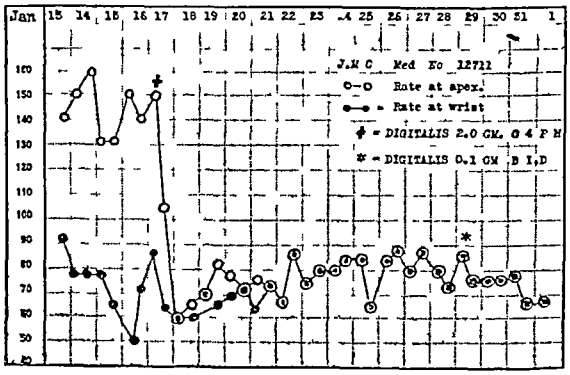

Chart 3—Effect of digitalis in Case 3

with a loud systolic murmur heard over the precordium The action was absolutely irregular There was a large pulse deficit of from 50 to 60 beats per minute An electrocardiogram revealed auricular fibrillation and some preponderance of the left ventricle The patient s weight on admission was 73 6 kg , lowest weight 70 4 kg The calculated dose on the lowest weight was 2 1 gm

8 Eggleston Cary Administration of Digitalis by Eggleston Method J A M A. 74 733 (March 13) 1920

The patient's condition remained unchanged until the fifth day, when he was given 2 gm of the digitalis extract at 4 p m An initial slowing of the heart was noted in four hours In twelve hours the rate was 60 a minute, without deficit Two hours later he was given some magnesium sulphate, after which he vomited There was no other evidence of toxic effect Improvement was continuous from this time, with no recurrence of nausea and vomiting which was complained of on admission He had had some nausea during the five days of rest before digitalis was given

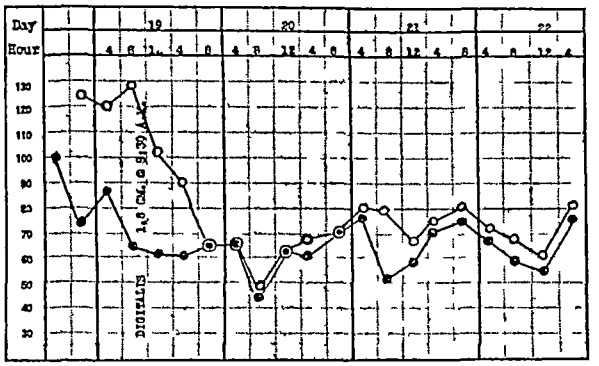

Chart 4 —Effect of digitalis in Case 4

CASE 4 (Med No 12296 Chart 4) —An American "matron" aged 55, admitted Nov 18, 1919 with the diagnosis of chronic myocarditis, auricular fibrillation, mitral stenosis and syphilis, entered the hospital for the sixth time for cardiac symptoms She had had rheumatic fever at 17 There were several miscarriages following the first child The Wassermann reaction was positive Cardiac symptoms began in 1914 The auricles had been fibrillating since 1915 She had been discharged from her fifth admission fifteen months before Since then she had been able to work part of the time The present illness began six weeks before admission with weakness and dyspnea She had been in bed nine days with dyspnea, "fainting attacks' and edema of the legs She appeared acutely ill with marked cyanosis, jaundice and dyspnea The heart was enlarged absolutely irregular, and rapid, with a deficit of about 40 beats a minute There was a loud systolic murmur heard over the precordium most marked at the apex Rales were heard over the bases of both lungs There was marked edema of the extremities She was mentally confused The patient's weight on admission was 75 6 kg , lowest weight, 60 kg

Because of the severity of her symptoms she was given 1 8 gm of digitalis extract at 9 30 a m on the second day At that time there was a pulse deficit of 35 beats a minute Though she was reported to have vomited about half an hour after receiving the digitalis at 8 p m the heart rate was 60 without deficit The initial slowing was noted in four hours All symptoms were improved, and she lost 6 6 kg in weight in five days On the eleventh day because of increase in the heart rate and slight gain in weight she was given 0 2 gm of digitalis three times daily for six doses Following this the heart rate averaged 70 a minute with very slight deficit during her stay in the hospital and improvement was continuous

CASE 5 (Med No 12093) —A Russian Jew aged 44, admitted, Oct 22 1919 with the diagnosis of chronic myocarditis, hypertension and arteriosclerosis, complained of dyspnea nocturia and insomnia The first attack of dyspnea occurred three years before while he was walking It was said that he had a blood pressure of 190 at that time During the last two years he had been troubled with pain in the arms on exposure to cold Nine months before he was told by his physician that he had kidney trouble, and rest in bed was advised There was nocturia during this time and for a month before admission it increased markedly The patient was pale and adipose with slightly cyanosed lips enlarged heart with loud systolic murmur a systolic blood pressure of 206, diastolic 140 evidence of edema at the bases of the lungs and slight edema of the lower legs The breathing was shallow and regular The heart also showed distinct gallop rhythm and pulsus alternans was present The rhythm was regular The rate was between 90 and 110 The patient's weight on admission was 81 kg , lowest weight in hospital 79 kg October 23 the vital capacity was 1 950 c.c., on the 24th 2 200 c c On the 26th the blood pressure was systolic 188, diastolic, 130 Pulsus alternans and gallop rhythm were present On this day the patient was given 2 5 gm of the digitalis extract without toxic symptoms On the 27th the vital capacity was 3 100 c c , blood pressure systolic, 194, diastolic, 116 Alternation and gallop rhythm were not present From this time on there was a steady improvement with an increase of the vital capacity to 3 600 c c Blood pressure on discharge was systolic, 176, diastolic 106

The patient was admitted a second time March 3, 1920 (Med No 13089, Chart 5) After leaving the hospital he was able to be up and about for most of the time until the second week before admission Since then he developed cough, increasing dyspnea, marked edema and sleeplessness During this time he remained in bed Examination disclosed a more severe condition than on the previous admission Pallor had increased dyspnea was more evident, and there was excessive edema The heart gave the same findings except that alternation was not noted The liver edge was palpable 10 cm below the costal margin in the nipple line There were few crackling rales at the bases of the lungs Blood pressure was systolic 190, diastolic 130 The weight on admission was 90 kg , lowest in hospital 66 kg The vital capacity March 4, was 2,125 c c March 5, the blood

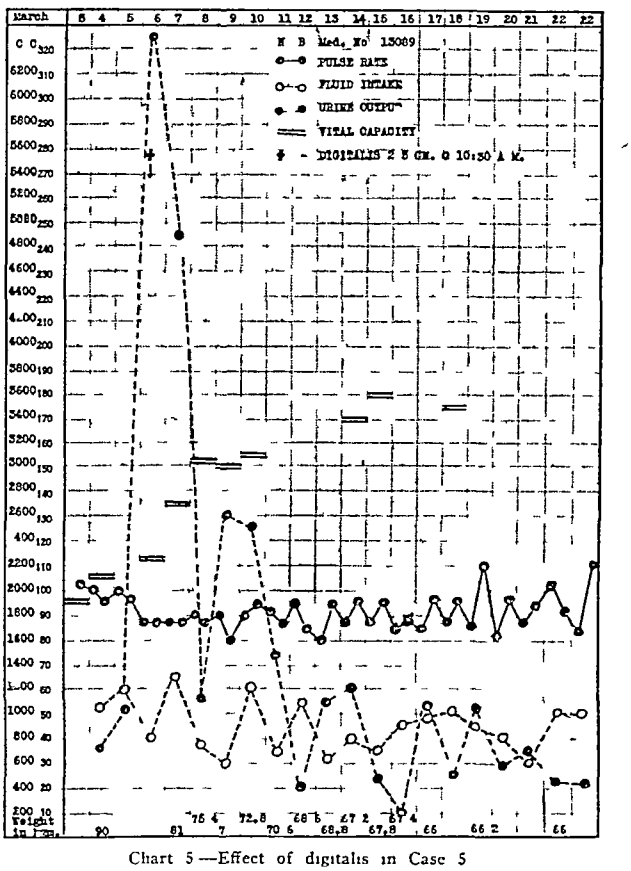

Chart 5 —Effect of digitalis in Case 5

pressure was systolic, 176, diastolic 130 March 6 the vital capacity was 2 250 c c Two small hemorrhages were discovered in the right retina As there was no definite improvement and the condition of the patient seemed serious he was given 2 3 gm of digitalis extract March 7 the note reads "Yesterday at 10 30 a m patient was given 2 3 gm digitalis His output chart shows that no urine was voided from 7 a m

to 12 55 p m when he put out 425 c c He voided 450 c c at 3 30 p m and 500 c c at 6 20 p m Beginning at 8 p m he voided practically every half hour during the night, making a total of 6,475 c c for the twenty-four hours The output for the day previous had been 1 000 c.c Vital capacity yesterday was 2,250 c c, which was an increase of about 150 c c over the previous day This morning it is 2,700 c c, an increase of 450 c c There have been no evident toxic symptoms in fact, the patient complains of being hungry He still has moderate Cheyne-Stokes respiration The night nurse reports that he seemed to sleep more comfortably except for the frequent voidings On the whole, he seems definitely better than yesterday" From this point on, condition improved and the vital capacity increased to 3,500 c c Later, April 10 after being allowed to walk about the ward and the fluid and food intake had been increased, the vital capacity dropped to 2 800 c c Following this he developed symptoms of dyspnea and weakness and it was necessary to enforce continuous rest in bed, at the time of compiling this report

CASE 8 (Med No 11646, Chart 8) —An American housewife, aged 57, admitted Aug 15, 1919, with the diagnosis of chronic myocarditis, auricular fibrillation, hypertension, arteriosclerosis and chronic nephritis complained of dyspnea She had been in the hospital twice before during the last three

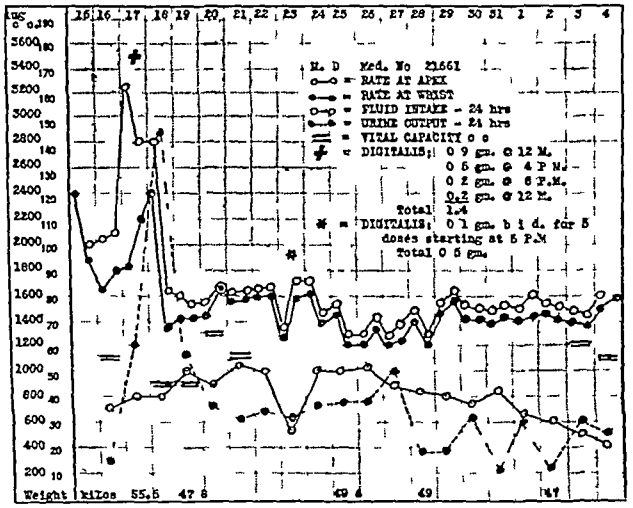

Chart 8 —Effect of digitalis in Case 8

years for symptoms of heart failure During the month previous to admission dyspnea and orthopnea had become increasingly severe The vision had been failing Retinal hemorrhages were noted a year before Examination revealed some cyanosis and distressing dyspnea The heart was enlarged, absolutely irregular and rapid, with a pulse deficit amounting on the third day to approximately 70 beats a minute The blood pressure was systolic 210, diastolic, 110 There was evidence of edema at the bases of the lungs The heart was enlarged There was no edema of the extremities The sclerotics were slightly jaundiced The patient s greatest weight in the hospital was 55 5 kg , lowest 46 2 kg On the third day the heart was very rapid with large deficit The patient was given 1 8 gm of digitalis extract in four doses at four hour intervals Sixteen hours from the last dose the heart rate was 80 with only a slight deficit The rate remained slow from this time There was a prompt and fairly marked diuresis The vital capacity was 1,100 c c on admission and was never greater than 1 300 c c during her stay of thirty-six days in the hospital The blood pressure remained high Though the patient was more comfortable after receiving digitalis and the pulse remained slow, she never showed any marked improvement She was discharged in an ambulance to continue rest at home or in a hospital for chronic cases

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ABSTRACT OF DISCUSSION

DR G CANBY ROBINSON, St Louis The recent advances in the use of digitalis may be spoken of under three heads In the first place, we have learned to regulate the dosage of the drug more effectively It must be used in doses sufficient to get the therapeutic, or, perhaps, the very early toxic effects Secondly, we have learned to recognize the early toxic symptoms through the use of the electrocardiogram and the occurrence of symptoms, such as nausea Thirdly, we have learned the importance of a standardized preparation With these three conceptions in mind, we are in better position in the treatment of heart diseases than we were previously Another factor which has improved the use of digitalis is our ability to differentiate cases in which the drug is especially indicated from those in which it is not so useful We now know that digitalis is very valuable in cases of complete irregularity of the heart action, the auricles being in a state of fibrillation, while in those cases where the heart is beating regularly, digitalis does not produce such striking effects I am very glad that we have had some information from Dr West and Dr Pratt regarding the effect of digitalis on hearts that are beating normally The effect is shown by exact measurements of the vital capacity Peabody showed that the vital capacity bears a direct relation to the state of circulation and diminishes as the circulation becomes inefficient That method is valuable for the study of the circulation The aqueous extract of digitalis should be of value in that it is stable and can be standardized definitely This paper marks a definite step forward in the use of digitalis in heart disease, where we often need the drug to act rapidly, and where we need to know accurately the strength of the drug we are administering

DR C F WAHRER, Fort Madison, Iowa Given a well-diagnosed case for the use of digitalis, the next most important step is to have a reliable and dependable drug to give to the patient It would certainly be a relief to have some dependable standard Sir James McKenzie said that he had no trouble in getting a good digitalis So will you all if you insist on getting it and learn where to get it As Pratt, Eggleston and others showed there is a vast difference in the preparations on the market We should know where to go for reliable goods and not depend on the offerings of the agents of the many pharmaceutical houses

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ETHER-OIL COLONIC ANESTHESIA*

WALTER LATHROP, M D
HAZLETON, PA

Experience with the method here described is presented from the standpoint of the operating surgeon, and has been derived from 1,002 cases of various kinds, chiefly goiter, thus distributed

Hyperthyroidism and exophthalmia	166
Cystic goiter	104
Colloid and cystic goiter	388
Parenchymatous goiter	226
Abdominal and miscellaneous	118
Total	1 002

In 1902, Cunningham, at the Boston City Hospital, devised an apparatus for introducing ether-laden air, which was used in that institution, without causing the complications of earlier methods This ether and air, however, caused colicky pains and discomfort The same conditions were found by Buxton, who observed, in addition, tenesmus, diarrhea and more or less collapse Many other reports were made by various observers, but they were largely negative, until the first marked advance was made by Sutton,[1]

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Sutton in Gwathmey and Baskerville Anesthesia New York D Appleton & Co Chapter XI

using oxygen instead of air with ether He reported 140 cases in the Roosevelt Hospital, New York City, chiefly in the service of George E Brewer, but the apparatus used was rather complicated, and this method was again allowed to lapse

Hewitt [2] says, "If the risk of diarrhea, melena and after stupor could in any way be greatly reduced, rectal etherization would be strongly indicated in certain cases" This has been accomplished by the present method of combining ether and oil

Dr James T Gwathmey made the first report on experimental work, before the International Medical Congress, London, in 1913 In 1915 he published a very complete paper [3] on colonic anesthesia giving its early history, experiments of various kinds, and the different technic used by those who had tried this method of inducing anesthesia That paper still stands as a complete record and reference, worthy of being read by all who may be interested in this subject

In cooperation with Gwathmey, experiments were made by Dr Charles Baskerville, professor of chemistry in the College of the City of New York and Dr George Barclay Wallace, professor of pharmacology, University and Bellevue Hospital Medical College, to determine the rate of evaporation of ether from oils, and tests were made with vegetable, animal and mineral oils, such as olive, cotton seed, peanut and soy bean, cod liver, lanolin and liquid petrolatum The ether used was free from acids, aldehyds and water The experiments were made in glass, and, while not showing the changes that would take place when the ether and oil come in contact with the walls of the colon, on account of diffusion and osmosis, yet some facts were well demonstrated

1 While ether boils at 34 6 C it does not escape violently from an oil-ether mixture, as from an aqueous mixture when heated higher, nearly to 37 C, or body temperature

2 The rate of separation of ether from oil quickly acquires a definite and fairly fixed speed [4] This rate of separation is important, as a proper content of ether may be maintained in the blood to produce a desired effect, as, for example, the surgical stage of anesthesia Four factors acting in harmony, help to maintain an even anesthesia

1 The constant rate of evaporation of the ether from the oil

2 The distention of the colon, causing less ether to be absorbed than when partially distended

3 Cooling of the mixture and the intestine as the ether leaves the oil, which retards elimination and absorption

4 The difference between the absorptive power of the colon and the eliminative capacity of the lungs (Gwathmey)

Within five minutes after the injection of the mixture into the rectum, it is heated to body temperature, some ether leaves the oil in the form of gas, which is absorbed by the blood in the capillaries about the colon The ether is carried through the liver by the greater circulation to the heart, and from there it is pumped into the lungs, where some of it is excreted by the air passages while the remainder is reabsorbed, and carried on to the brain and central nervous system The odor of ether and paraldehyd can be detected on the breath in from three to five minutes after the administration of the preliminary dose The accumulation of mucus or saliva, seen often in inhalation anesthesia, is absent, there appears to be no irritation of the lungs, as only the ether required for narcosis passes through the respiratory tract, and the bronchial secretions which are increased by local irritation under inhalation methods, are absent

The respiration is normal, as a rule, and very seldom noisy or stertorous, if the anesthetist is watching the patient The eye reflex is usually retained, even though good muscular relaxation is present I have noticed analgesia in a number of cases, as also have others, and have conversed with the patient at different times during the operation, this is not to be expected very often The pulse is maintained at an even plane, if rapid, as in hyperthyroidism, it usually remains so, though we frequently get a slowing which is no doubt psychic In ordinary cases the pulse remains full and strong The blood pressure varies In cases of great nervous tension, such as exophthalmia, observation has shown that the pressure falls after the patient is asleep, and usually rises immediately on his regaining consciousness The diastolic pressure is usually low Pressure in ordinary cases does not vary much though the amount of surgical interference naturally has a decided effect This applies to hemorrhage, and undue manipulation of viscera

The safety of this method is shown by several factors, such as the rate of evaporation of ether from oil in accordance with well known physical laws The ether may be separated from the oil at any time by warming, but unless deliberately raised to a high point, it passes off slowly, especially at body temperature After administering the mixture it is impossible to withdraw oil and leave ether, or vice versa Each molecule of one is bound to a molecule of the other, and the union is broken only by evaporation It is impossible to have deep anesthesia at one minute, and light anesthesia at another, unless purposely accomplished by rebreathing, or made light by an air-way tube or a face free from covering

Sutton has shown that when the colon is fully distended, less ether is absorbed When we recall that the absorbing surface of the colon is much less than that of the lungs, we see that some distention of the colon is necessary to increase its absorbing surface, and we know that overpressure does not take place for there is very seldom distress after anesthesia such as diarrhea, bloody stools or tenesmus, that was usual with the Cunningham-Sutton method Again, when the ether leaves the oil as gas, the intestine is cooled during the process This retards elimination and absorption thus regulating the dose The temperature of the patient remains constant and the cold, clammy skin so often seen under inhalation anesthesia is absent in nearly all cases The gradual absorption of the ether by the colon no doubt acts as an element of safety Wallace made a study for one hour by sphygmographic tracing, of a number of animals under ether-oil anesthesia, during which the pulse and respiratory tracings never varied This fact has been well demonstrated in many hundreds of patients surgically anesthetized by this method in whom without any supplementary anesthetic, the pulse, respiration,

2 Hewitt, F W Anesthetics and Their Administration New York the Macmillan Company 1912
3 Gwathmey, J T American Year Book of Anesthesia and Analgesia 1915
4 Baskerville Am J Surg January 1916

reflexes and blood pressure all remained constant, except, as already mentioned, in hyperthyroidism

The value of olive oil has been shown by Graham, who proved beyond question that this oil is capable of restoring to the blood certain properties which are inhibited by the action of the ether, that is, those concerned with phagocytosis The injection of certain amounts of the oil into the rectum is followed, after three to six hours, by a restoration of phagocytic power, although ordinary depression lasts for some time The oil absorbs any ether vapor that may still remain in the intestine, and not only prevents protracted undesired effects, but also insures speedier restoration of the opsonic index, and satisfactory recovery

It is interesting to note that the experiments of Dr W H Park of New York showed that an ether in oil mixture killed the colon bacillus in one minute, thus giving another factor of safety in the possible prevention of infection Our experience has shown that the postoperative effects are better than with the routine inhalation methods of ether and chloroform, though there is no doubt about the great value of nitrous oxid and oxygen anesthesia

After ether-oil anesthesia there is less vomiting or nausea, and the patient is usually comfortable and can retain nourishment, and of greater importance is the fact that there is considerable analgesia for some time, often for two or three hours, which adds to the ease of the patient

Anociation as practiced by Crile can be carried out easily, and no doubt is very valuable in many conditions, especially exophthalmia and hyperthyroidism Ether-oil anesthesia is especially useful in head and neck operations, because the operator is not troubled by either cone or anesthetist It is also useful in hernias, especially as seen in patients with asthma, and in our work among coal workers, who have the common condition known as miners' asthma These patients sleep calmly throughout, with none of the choking and cyanosis seen under ether by inhalation The value of local anesthesia must not be forgotten in these conditions also

Patients with short thick necks are especially good subjects for colonic anesthesia The most valuable of all its uses is in those conditions of high nervous tension, such as hyperthyroidism, or in cases just on the border line of toxic goiter, and also when fear is a prominent factor, as seen in nervous women, and in men as well To be able to etherize a patient in bed, remove her to the operating room, perform the operation and return her to bed with little or no knowledge of what has been done, is surely worthy of consideration, and trial in proper cases

TECHNIC OF ADMINISTRATION

It is most important that the use of the mixture be in the hands of one who can begin its administration and have it under his care throughout and in all cases It should never be delegated to a different physician or nurse each time it is used The same care should be taken as in any other type of anesthesia Experience is the great factor, and in our earlier work we used much more anesthetic than at present After trying out various combinations and proportions, we settled down to the routine method to be described The patient should be under observation for twenty-four hours or more This does not apply to exophthalmic or hyperthyroid conditions, in which preliminary observation and treatment are imperative The evening before operation an enema of soapsuds (2 pints) is given A second enema of 1 or 2 pints of clear, tepid water is given early the next morning To illustrate Supposing the operation is set for 11 a m , then at 9 30, 2 drams of olive oil (warm), 3 drams of paraldehyd and 4 drams of ether, are given The patient should be kept as quiet as possible At 9 50, $\frac{1}{4}$ grain of morphin and $\frac{1}{150}$ grain of atropin are given hypodermically At 10 20, 3 or 4 ounces of ether and 2 ounces of olive oil (warm) are given The oil and the ether are put in a bottle and shaken thoroughly The patient should be on the left side with both knees flexed, the right acutely A rectal or colon tube with a funnel should be inserted not more than 6 inches, care being taken to have the mixture in the tube and all air expelled, before inserting The mouth and nose should be covered with several thicknesses of gauze The injection should be given slowly, *about one ounce a minute,* the funnel being held about 3 inches above the level of the patient The tube should be clamped and allowed to remain in the rectum so that the mixture may be withdrawn during operation if there should be any indication for doing so If there is any excitement, 15 or 20 drops of chloroform usually quiets the patient If the patient cannot retain the oil-ether mixture, one should not try to repeat, but abandon it The patient should be ready for operation in from twenty to thirty minutes from the time the last injection is given The reversed Trendelenburg position seems to aid in the maintaining of an even plane of anesthesia The jaw should be supported so that respiration will be unobstructed

In alcoholic subjects, $\frac{1}{100}$ grain of scopolamin (hyoscin) is added to the preliminary hypodermic injection of morphin When the operation is completed, the bowel should be well irrigated with tepid water until it returns clear The colon may be gently massaged from right to left to aid this One pint of water is then put in the bowel and left, or olive oil may be given in quantity of 4 ounces to prevent any possible irritation that may be feared, though in more than a thousand cases we have had only two instances of irritation, both being an annoying looseness, which speedily yielded to treatment

Hyperthyroidism or exophthalmia offers a most striking condition in which the value of this method is shown These patients, as is well known are usually high strung, nervous and apprehensive, while the danger itself is by no means small We have repeatedly operated, with little or no knowledge on the part of the patient, stealing the gland has indeed been easy The procedure with these patients is as follows Supposing operation is decided on for Saturday, then a week previous, we give each day an injection of 2 ounces of tap water, with a dram of ether in it This, the patient is told, is for its tonic effect The morning of operation she is given the regular dose of ether-oil and paraldehyd followed by hypodermic, and the full mixture, all given while she is in bed She usually goes to sleep very quietly, though at times requiring a few drops of chloroform, is taken to the operation room, the gland removed, or ligation performed, and when she awakens, she is in her bed with little knowledge of what has taken place, aside from knowing something has been done to her throat, but the fear is greatly lessened or gone

COMMENT

Surely this is well worth trying in such conditions, and when supplemented by Crile's nerve blocking, is an ideal means to get results in a very bad class of cases

Mr Wade[5] of London, anesthetist to the Queen's Hospital, says "There is no doubt that this is a very valuable method of anesthesia for many operations in plastic surgery"

Ether-oil colonic anesthesia is *contraindicated* in *conditions of rectal disease,* or when *pain is caused* by its introduction It is not recommended for routine use, as the time required for successful administration would not permit of this method especially when a number of operations were scheduled For regular clinic work we depend on ether by inhalation, reserving colonic anesthesia for the class of patients already mentioned When successfully used, it will not be given up by the surgeon who tries it Dr Arrowsmith of Brooklyn has shown the value of this method in bronchoscopy and in gastroscopy, in which the absence of excess mucus in the air passages is a most valuable factor, as is also the fact that there is a clear passage for the escape of ether vapor The value is undoubted in cases in which absorption must be minimized on account of some lung, heart or kidney lesion

Our experience with this method for children has been very small, and has not been satisfactory, owing chiefly to the lack of cooperation on the part of the child, and the expelling of the mixture

To sum up, we would advocate ether-oil colonic anesthesia in the type of cases mentioned, and emphasize the safety, comfort, control, efficieny and simplicity of the method Under efficiency, we can do no better than quote Gwathmey, whose conclusions are practically in accord with our own

The method insures prevention of shock narcosis is smooth and of uniform depth pulse and respiration remain near normal A complete relaxation of the muscular system is secured The stage of excitement is eliminated The patient inhales a warm moist vapor and the direct irritation of a concentrated vapor is overcome There is no eructation of gas, before or after, in 95 per cent of cases Hypersecretion of mucus and saliva is absent The patient s stomach, lungs and kidneys are spared The absence of the ether cone in surgery of the head and neck lessens the technical difficulties of the operation by giving continuous access to the field of operation

Postoperative nausea and gas pains are reduced to a minimum

State Hospital

ABSTRACT OF DISCUSSION

DR. JAMES T GWATHMEY, New York Certain fundamental principles should be emphasized When physiologically understood, ether-oil colonic anesthesia is one of the easiest methods to administer, requiring only a rectal tube with funnel attached and quiet for the patient It is one of the safest methods The margin between full surgical anesthesia and a toxic dose is greater than with any inhalation method It is one of the most pleasant methods for the patient, as attested by the fact that those who have tried other methods prefer the colonic A greater relaxation of the musculature exists than is usual with any inhalation anesthetic A smaller amount of ether per hour is required than by any other method The estimated amount is two ounces per hour which seldom varies It is regulated as easily as any inhalation method, by (*a*) covering the face with a towel to deepen the anesthesia (*b*) by placing an airway tube to lighten or (*c*) by unclamping the rectal tube and draining the residue and flushing thoroughly It can be terminated at any time, as far as the anesthetic is concerned, the patient continuing to sleep from the other drugs used While the rate of absorption is slightly different with each patient, dependent on the age temperature and general condition it is constant when established—an anesthesia deep at one time and light at another is physiologically impossible The brain is more completely protected against reflex stimuli than by any method of inhalation anesthesia, and this is proved by the patient crossing his legs, changing his position or conversing with the surgeon as in spinal analgesia So called analgesia with nitrous oxid-oxygen, where the patient is continually squirming and refusing to be comforted by the anesthetist but on awakening remembers nothing of the pain is not analgesia but amnesia The brain is not protected in so-called analgesia with nitrous oxid and oxygen The complete analgesia of the colonic method is dependent on the synergistic action of all the drugs concurrently given with the ether—an extra amount of ether will not have the same effect The quiet sleep and analgesic stage for a few hours after the anesthetic is terminated is an advantage to the patient, and should not be counted against the method

DR. ALEXANDER PRIMROSE, Toronto In the hospital at Sidcup, England Major Gillies found that rectal anesthesia by ether oil was entirely satisfactory In these cases requiring a prolonged technic for the repair of face and jaw wounds it was important to get the anesthetist out of the way of the operator

DR J SHELTON HORSLEY Richmond, Va When a cautery must be used in the mouth colonic anesthesia is ideal It would seem indicated in cases of exophthalmic goiter but here, in my hands the results have been unsatisfactory, probably because this disease causes some affection of the liver, as Dr Crile has shown If you pour all the ether through the portal circulation and concentrate it on the crippled liver there may be unfortunate results It is like giving ether by inhalation to a patient with seriously damaged lungs

DR GEORGE W CRILE, Cleveland Do you use local anesthesia in conjunction with local analgesia?

DR WALTER LATHROP Hazleton Pa Yes Our best success has been with the exophthalmic type of goiter We have had very few mortalities not more than we would have had with any other method because we know what hyperthyroidism means We get these patients in the best condition possible If we are going to operate a week from today on a woman highly strung nervous scared to death she is given a dram of ether and two ounces of tap water as a "tonic" This is repeated daily until the seventh day when she is given the regular dose of paraldehyd ether and oil followed by a hypodermic She wakes up in bed after the operation with little knowledge of what has been done

5 Wade Anesthetic Supplement Am J Surg July 1919

Early Diagnosis of Breast Cancer—It is wrong to teach students that axillary lymphatic enlargement is a sign of breast cancer and it is criminal to ask men to wait for its appearance before making a diagnosis Which of us would await the onset of gangrene before diagnosing strangulation in a hernia? Yet the enlarged lymph nodes of the cancerous breast are almost as fatal a complication in the long run as gangrene is in hernial strangulation Bloodgood s aphorism expresses this graphically when he tells us that a woman with a cancerous lump in her breast, but no cancerous glands in her axilla has four chances out of a possible five of a permanent cure by operation whereas a woman with a cancerous lump in her breast and cancerous glands in her axilla has not one chance in five! You will see then that to wait for the appearance of an enlargement of the axillary glands to make a diagnosis of cancer of the breast is to throw away 600 per cent of your pa ient s chances of an operative cure An earlier diagnosis is our only hope of obtaining better results—W Doolin *Med Press,* April 28, 1920

RELATION OF QUANTITATIVE METHODS TO THE ADVANCE OF MEDICAL SCIENCE*

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SAN FRANCISCO

The progress of science has been marked by the transition from purely qualitative observations to quantitative determinations In astronomy the possibility of measurements was perceived very early and carried out with comparatively a high degree of accuracy In physics and chemistry the phase of measurements came mainly with the modern development of precision instruments, and it has been largely through their use that these sciences have come up from the notions of alchemy and of fire and water as elements Measurements in the biologic sciences are still more recent, but are now being pursued with increasing attention They occupy a prominent place in a large part of recent biologic literature, and their importance has been so far emphasized as to give the name *Biometrica* to a leading research journal in this field

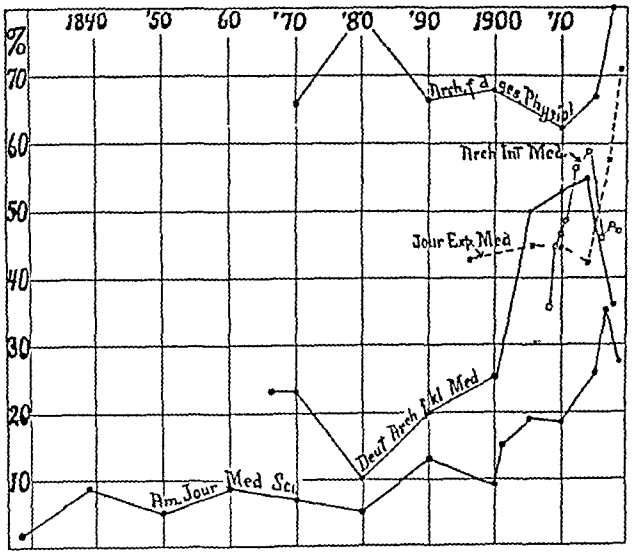

Chart 1.—Percentages of quantitative reports in various medical journals

That the medical sciences are following the same trend has frequently been noted I have examined the extent to which this is true by sorting, in several representative journals, the original contributions in two classes, which may be called quantitative and nonquantitative contributions Among the former were included only reports of investigations in which the idea of quantity was a main if not the sole objective of the investigators—mere statements of such quantities as weight, temperature or blood pressure were not used to classify an article as quantitative if they were but incidental to the main purpose of the description Statistical analyses of clinical or other material were counted as quantitative In going over the literature from this point of view, one is struck by the comparative vastness of opportunity for important research in the domain of measurements As the discovery of Columbus was delimited in succeeding years by thousands of surveyors, so the discoveries of Harvey, of Pasteur and of Bright have prompted myriads of researches on circulation dynamics, on virulence and immunity, and on kidney function

The results of the survey are shown graphically in Chart 1 It will be seen that of the contributions to the *Archiv fur die gesamte Physiologie* about three quarters have always been quantitative reports In the field of more strictly medical research occupied by the *Journal of Experimental Medicine,* the quantitative reports have been about 50 per cent of the whole number, and apparently are on the increase The same approximately is true for the *Archives of Internal Medicine* These represent the comparatively recent type of medical journal for original reports The *Deutsches Archiv fur klinische Medicin* and the *American Journal of the Medical Sciences* represent the older type of clinical journal, and they illustrate well the shift in emphasis toward quantitative endeavor which characterizes the more recent work The effect of the war is not yet clear, but there is a suggestion in both these curves of an interruption in their ascent or a positive decline

Among the quantitative reports encountered in these journals, a considerable number were so classified because they made use of statistical methods in analyzing qualitative data In many other cases the original data consisted of measurements of one sort or another to which statistical methods were applied in assembling and making deductions It is therefore apparent that statistical methods of research, while primarily designed for problems in economics, in recent years have found increasing application in medicine In other biologic sciences in which they have been employed more seriously they have become recognized as particularly applicable to the study of "characters" which vary on account of a large number of causes that are difficult or impossible to separate Medical problems are very largely of this class and, accordingly, it is no surprise to find medical literature, and especially clinical literature, abounding with statistical reports It is a remarkable fact, however, that almost without exception, even in the hands of workers in our foremost research and teaching institutions, medical statistical studies have confined themselves to the consideration of simple averages or associations, with little or no attention to the degree of probability supporting the "conclusions" drawn—without, in fact making any serious application of the theory of probabilities with which they are so intimately concerned Under these circumstances, it is of course natural that statistical methods themselves should be blamed for many abuses

It being possible in this paper to call attention to only a few of these methods, I shall do so by illustrations, and without presenting mathematical proofs[1]

1 *Inconsistency of Statistical Data*—If it were reported that among 100 cases of hypertension there were (A) fifty-two over 50 years of age, (B) thirty-one with albuminuria, and (C) forty-seven with decreased phenolsulphonephthalein elimination, and that of those over 50, fourteen had albuminuria (A B), and four decreased phenolsulphonephthalein excretion (A C), that albuminuria and decreased phenolsul-

* From the Department of Medicine University of California Medical School
* Read before the Section on Practice of Medicine at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 For an elementary exposition of the theory of probabilities the reader is referred to Yule, G U An Introduction to the Theory of Statistics Griffin & Co 1912 for a guide to the use of formulas Davenport C B Statistical Methods New York John Wiley & Sons 1914

phonephthalein (B C) were associated nine times, and in the group over 50 years (A B C) twice, there would be nothing obviously wrong with the figures And yet, by simple arithmetic,[2] it can be shown that they are impossible

2 *Association of Attributes* — Attributes may be associated positively (e g, cases with positive Wassermann reactions and aneurysm), negatively (e g, presence of adenoids and excellence of intelligence of schoolchildren), or they may be independent (e g, blue eyes and gastric ulcer)

The Criterion of Independence If two attributes, such as astigmatism (attribute A) and adenoids (attribute B) are independent, then the proportion of A's multiplied by the proportion of B's will tend to equal the proportion of A B's (individuals having both conditions) Thus, if among 1,024 schoolchildren, 384 had astigmatism and 144 adenoids, we should expect, if these are independent, that about $\frac{384 \times 144}{1\,024} = 54$ would show both abnormalities

A "coefficient of association" may readily be calculated to express numerically the degree of positivity or negativity in an association, from +1 (complete positive association) to 0 (independence) or −1 (complete negative association) But the value of deductions as to associations of attributes expressed by such a coefficient or otherwise will naturally depend on the numbers of observations made, and accordingly the amount of variation to be expected from chance alone This expectancy may also be shown quantitatively, as will be shown in the discussion of variables

3 *Manifold Classification* —This may be illustrated by the accompanying table showing the number of times certain gastric acidity findings are supposed to have occurred in association with the diagnosis given

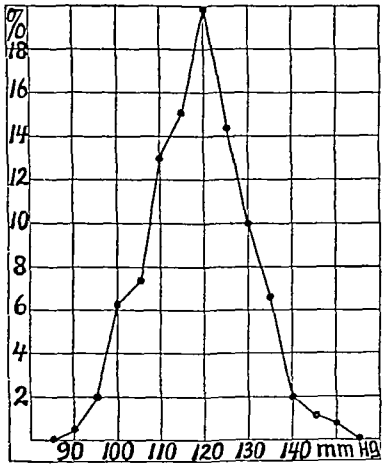

Chart 2 —Example of a frequency polygon showing the distribution of systolic blood pressure measurements in a group of 314 young men

Not only may the relative frequencies of diagnoses in relation to acidity findings and vice versa be seen from such a table, but, by calculating a contingency coefficient, it may be shown whether or not on the whole these conditions are related to the acidity findings, and if so whether the relation is very close or the reverse, that is, the general value of acid measurements could be stated mathematically and this might be compared with the general value of other diagnostic procedures

4 *Frequency Distribution* —As distinguished from the simple attributes of the foregoing examples, the following case of a frequency distribution illustrates some of the special methods applicable to variables If the blood pressure of a group of young men is measured, the results may be expressed in a table showing the number of measurements in the "class intervals" 100 to 104 mm of mercury, 105 to 109, etc, and the same may be shown graphically in a "frequency polygon" such as Chart 2 If the observations are numerous enough and the class intervals small enough, such a polygon may closely approximate the ideal "frequency curve" for the series In medical literature there usually accompanies such studies a statement of the arithmetical mean or common average, and often of the "range" or the highest and lowest in the series, but very rarely indeed is serious attention paid to other characteristics of the frequency distribution, such as the "median" (or mid-value), the "mode" (or most frequent value, i e, the "peak" of the curve), the question of "complexity" of the curve, or the amount of "dispersion" present The last item is particularly important and is not covered adequately by a statement of the range, which depends on the chance variation of extreme values of the variable A good measure of dispersion must take into account the scattering of values among all the members of the series Of several that do this, the "standard deviation" is most commonly used by statisticians [3]

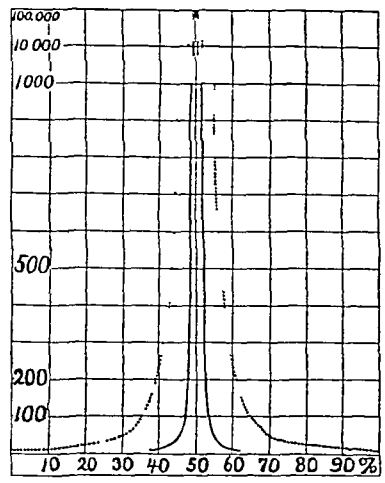

Chart 3 —Precision of percentage lymphocyte count

5 *Simple Sampling of Attributes* —This finds an example in the ordinary differential count of leukocytes Our interest here, from the statistical point of view, is in the "precision" or accuracy of the observed proportions of the different types of cells It can be shown that this varies as the square root of the number of observations on which the proportion is based, that is, the percentages based on a count of 400 cells are not four times but only twice as dependable as those obtained by counting 100 cells

GASTRIC ACIDITY AND DIAGNOSES

	Hyperacidity	Acid Normal	Hypo Acidity	Totals
Gastric cancer	20	56	200	276
Peptic ulcer	310	90	4	404
Gallbladder disease etc	200	165	65	430
Totals	530	311	269	1 110

Again, if in a given case the percentage of lymphocytes in one count of 100 cells was found to be 47 per cent and later in a similar count 53 per cent, it may be important to inquire whether or not the difference of 6 per cent is due to an actual change in the composition of the patient's blood—in other words, whether or not the difference is readily chargeable to "fluctuation of simple sampling" or whether probably "significant" Most clinicians would regard this difference as probably indicating a change

2 Thus 100 — 52 — 31 — 47 + 14 + 4 + 9 — 2 = — 5 (Yule)

3 The standard deviation is the square root of the average of the squares of the deviations of the series from the mean squaring

To examine this point, let us suppose that in this case the actual percentage of lymphocytes as determined by a count of millions of cells examined on the same day was 50 per cent It is evident that if this large number were counted by groups of 100 cells each, the percentages obtained from these separate groups would for the most part differ more or less from the general average of 50 per cent They could then be treated as a series of variables and their range and standard deviations could be determined as indicated above Or, without using such an experimental method, the standard deviation (in this case 5 per cent) could be obtained directly from a formula [4]

Now it can be shown experimentally as well as mathematically that a series of variables such as this will be scattered over a "range" approximately three times the standard deviation both above and below the general average In our example, some of the lymphocyte counts will be as low as $50-(3\times5)=35$ per cent , and some as high as $50+(3\times5)=65$ per cent , also, within the limits of the "probable error" (about two-thirds the standard deviation, hence in this case from 47 to 53 per cent) the chances are even that in our illustration a given count of 100 cells will yield a lymphocyte percentage within or without these limits It is therefore apparent that the observed difference of 6 per cent between the counts mentioned is quite without significance

Chart 3 shows, in relation to the number of cells counted, the precision of the percentage lymphocyte count in the case we have considered The solid line shows the "probable error," i e , the limits within which there is an even chance for an individual count to fall The dotted line shows the range, i e , the limit which will include about 99 per cent of the observations Occasionally results will even fall outside these limits through the operation of chance alone

The lesson of these examples of the blood pressure study and the lymphocyte count, it will be seen, have a general application to studies involving averages, percentages and other variables The average metabolic rate, or weight, agglutination titer, or blood nitrogen in one group of individuals as contrasted with another, the mortality, or the percentage of cures following different methods of treatment may and frequently do present differences which writers refer to as 'very striking" or "highly suggestive," and which simple calculations show to mean nothing whatsoever The illustration we have used has been dwelt on because it brings out the one pitfall of statistics commonly overlooked by medical workers—that associated with failure to make sufficient allowance for the operation of chance in sampling In forming inferences from averages, great care is needed to exclude other causes of differences than the one to be investigated, but this necessity is more obvious than the necessity of considering in connection with each average its probable error or other measure of precision

Although the mathematical training necessary to use such simple aids and safeguards in statistical work is comparatively little, it is too much to expect any sweeping change in the practices of the present generation of writers But for the future the defect can be remedied by readjustment of the premedical curriculum The change would not require more time in the premedical course, and would not necessarily curtail the usual instruction in physics, chemistry, biology and language, although it would undoubtedly be justified at this price Two or three hours a week for one semester would provide a good elementary knowledge of the theory of probabilities, and most medical students have spent enough time in mathematics to have included in it this subject without detriment to their general mathematical training For the purposes of general culture and mental discipline it would equal higher algebra, conic sections or trigonometry, which many of them study, and for their practical purposes it would far surpass these subjects Although calculus is useful, the elementary course in theory of probabilities would not necessarily require as prerequisite anything more than high school algebra In most universities the cooperation of the mathematics department would be necessary to rearrange the courses open to medical students, in fact, in many departments of mathematics it would be necessary to organize the course in theory of probabilities, as this subject at present is commonly left to the department of economics

4 $\sigma=\sqrt{npq}$ where n = the number of cells counted in each sample p the chances for an individual cell encountered to be a lymphocyte and q the chances for it to be other than a lymphocyte

SUMMARY

A survey of medical literature shows that medicine, following the trend of other sciences, is seeking its advance increasingly through the use of quantitative methods of research The multiplicity of variables inherent in the laboratory, as well as the purely clinical material, requires the constant use of statistical methods of analysis and interpretation Medical writers generally have relied purely on intuition in these interpretations—a practice that leads very frequently to gross misstatements of results, and which has thereby brought unmerited discredit to the use of statistical methods in medicine The elementary theory of probabilities which deals scientifically with these methods is comparatively a simple branch of mathematics, is of great practical significance, and should be required in the premedical curriculum

ABSTRACT OF DISCUSSION

DR HENRY A CHRISTIAN, Boston There is no question that there is a false security felt in figures With insufficient knowledge, we attempt to utilize figures as a basis for drawing conclusions, and we make many mistakes in doing that Dr Kilgore pointed out some of the sources of these errors Among others are the quite common error made by medical men in drawing conclusions in statistical form, from a very small group of cases, or to figure out the percentage of the occurrence of some symptoms, or some preceding disease in the history of the patient, or some finding in the patient, and conclude that it has a causal relation on account of its frequency of occurrence Perhaps, because we find that 30 per cent of our patients have bad teeth, we conclude that the bad teeth are the cause or one of the causes of that condition We do not stop to secure the figures relative to the occurrence of just those same things in persons who are otherwise well, or who have entirely different diseases If we are going to play with figures we should know the rules and laws of the statistician On the other hand, it is well to remember that the statisticians, knowing the laws of the game as far as statistics are concerned, fall into error, because often they draw their conclusions in a very accurate way from the statistics, but the data from which they make the statistics contain many inaccuracies For example, you will find statistical literature showing the relative frequency of death with pneumonia, and death without pneumonia, in cases of influenza That is not of very much use because in most of the cases, the death report is made by a man who did not know whether the patient died with or without pneumonia He was too busy examining the

lungs, or he did not realize how few signs many patients with influenza had, when the necropsy showed a very extensive pneumonia

DR E S KILGORE, San Francisco Dr Christian's point against the professional statisticians who attack medical problems is well taken Medical problems obviously require medical training for their intelligent study But it is also true that statistical problems require a knowledge of statistical methods for their intelligent handling In some cases both requirements have been met by the collaboration of the medical man with the statistician But the point I wish to emphasize is that the applications of the theory of probabilities in medicine are very numerous, so numerous that, at least, a rudimentary knowledge of the subject is essential for medical investigators, and even for those who would read intelligently and critically the medical literature

MISLEADING SYMPTOMS AND ROENTGEN-RAY FINDINGS IN SUSPECTED MASTOID ABSCESS *

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There is no especial literature pertaining to the subject that I am to present, for it is purely a clinical one, and such deductions as may be reached are wholly derived from clinical experience

When to operate in suspected mastoid abscess is largely an individual question, to be determined by the symptoms shown in each case, but we have all learned that there are certain cardinal principles which govern us in our consideration of the indications in the individual case However, experience teaches us that these cardinal principles must be duly and carefully weighed in each instance, for in many cases the exception proves the rule in suspected mastoid abscess, and our operative findings not infrequently are in dissonance with the subjective and objective symptoms

A septic temperature course, painful mastoid to pressure, a leukocytosis and a history of purulent middle-ear discharge of a week or ten days' duration would be regarded as a syndrome clearly indicating a suppurative mastoiditis, demanding operation Bearing on this are the history and operative findings in Case 1

CASE 1.—Sylvia B, colored aged 37, ten days before coming to the hospital developed sore throat, with chilly sensations, and shortly afterward her nose began bleeding and both ears pained a great deal, followed by a serosanguinolent discharge from her ears A swelling, painful on pressure, developed back of each ear

Examination of the ears made at the hospital revealed both canals full of pus There was marked swelling and tenderness over both antrums and mastoid tips The temperature was 104 4 in the afternoon The blood count was 11 200 leukocytes and 78 per cent polymorphonuclears

The history and symptoms pointed conclusively to double mastoid abscess, so the following morning, the temperature at the time being 102, the right mastoid was first explored, not a drop of pus or even a soft cell being found, clear to the antrum, which also was free of pus The left mastoid was then opened, with the same result as the right The temperature went to 104 in the afternoon of that day and then progressively declined the patient being discharged in normal condition nine days after the operation

What prettier picture of mastoid abscess could be asked? It was so positive clinically that we did not even wait for roentgen-ray pictures of the mastoids, and with these symptoms, negative roentgen-ray findings would not altogether have convinced us that there was not pus in the mastoid cells Both mastoids were congested, and perhaps would have broken down in a short while, so the operation may have been conservative in this sense But the fact remains that with freely draining middle-ears, this case was running a high, septic temperature course, and presented what usually are regarded as positive mastoid symptoms

The question that would here arise is, Would I have been justified, in the presence of these typical symptoms, in delaying operative interference? There can be no fixed rule as to when to operate in such cases, for we all know from actual experience how rapidly some develop, and how quickly a meningitis or sinusitis can set up when the pus absorption is so great In the case just related, both subjective and objective symptoms not only justified, but to me, demanded operation

We are all familiar with the type of abscess found in young children, when pus has broken through the antral wall externally producing a fluctuating mass back of the ear So Case 2 may have been regarded, if we had not carried our operative investigation deeper than customary

CASE 2.—Sterling M white, aged 12, was brought to the hospital with a history of earache in the right ear, beginning three weeks before Something like a 'boil' according to the father, developed behind the right ear, with a great deal of pain and increasing swelling The child's father stated that the boy had experienced similar attacks previously, and some time before the same ear had swelled and burst externally, back of the ear

Examination revealed a fluctuating mass, about the size of a small hen's egg over the right mastoid process The membrana tympani was congested but there was no pus in the canal The temperature was 100, in the afternoon, the blood count leukocytes 11 200, polymorphonuclears, 80 per cent Roentgenoscopy revealed the mastoid normal

Under ether the mass was opened with the usual mastoid incision After removal of a large quantity of pus the entire mastoid process was bared of periosteum, and carefully investigated for a sinus None being found, the antrum was uncovered but no pus encountered The boy left the hospital in a few days, entirely recovered

There was in this case evidently a burrowing of pus from the middle ear beneath the periosteum of the external auditory canal, without involvement of the bone, but it is remarkable that the corresponding membrana tympani was not ruptured Perhaps this was one of the type of cases that we sometimes see reported as "mastoiditis without middle-ear inflammation"

Along somewhat similar lines is Case 3

CASE 3.—Charlie J white aged 34 came to the hospital with a history of pain beginning in the right ear five weeks previously There had been a slight discharge from the ear, but none recently Four weeks before he began having pain back of this ear with swelling and for this reason, the pain continuing, he came to the hospital

Considerable swelling was found over the right mastoid, and it was intensely painful on pressure There was no discharge from this ear The temperature was not running high but would make quick drops to below normal The blood showed 11 200 leukocytes and 84 per cent. polymorphonuclears Roentgen-ray examination revealed a normal mastoid

The usual mastoid incision was made and a large amount of thick pus removed The bone apparently was healthy, but

* Read before the Section on Laryngology Otology and Rhinology at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

the antrum was entered, without pus being found Convalescence was uninterrupted, with the exception of several marked exacerbations of temperature, with sudden drops to subnormal, coming on the third, sixth, seventh and eighth days after operation, due probably to some retention, as there were no symptoms of intracranial complication, and from the tenth day following operation there was no further fever

Here was another case of middle-ear abscess which had burrowed beneath the periosteum, without bone involvement, and could, to the operator's exaltation, be called a "blind" mastoid abscess, but the surgeon would have to be indeed "blind," in more respects than one, so to denominate this condition

In this connection I should like to say that I am very skeptical of numerous reported cases of mastoiditis without previous middle-ear suppuration I doubt whether this ever occurs, though in this conclusion I may be quite wrong Still, it is somewhat difficult to conceive of a suppuration in the mastoid cells without a previously existing suppurative condition at the gateway to these cells—the middle ear

In reviewing my entire experience in mastoid surgery, I cannot recall an instance of suppurative mastoiditis in which either from the history or clinical evidence, a previously existing middle-ear inflammation was not traceable To me it is a good deal like reported cases of primary laryngeal tuberculosis—I have heard of such cases, but have never seen one, this condition in my experience always being secondary

A case of more than ordinary interest is this

CASE 4—C S O, man white aged 22 consulted me July 28 last year with this history He had been subject to "risings" in the left ear all his life He had four attacks of this kind while in the army in France Six days before an intensely painful abscess developed in this ear Since then the ear had been discharging thick yellowish pus He had been having high fever and the entire left side of his head had been quite painful In fact, his suffering was so intense that he was being kept constantly under the influence of morphin He had lost 16 pounds since the beginning of this attack

On examination, the external auditory canal was found full of thick, yellowish pus with drooping of the posterosuperior canal lining There was intense pain on pressure over the mastoid antrum and tip The patient's temperature was 100 4 at 3 p m A roentgenogram revealed a cloudy mastoid apparently beginning to break down Operation was refused, but the symptoms continuing on the afternoon of the 31st, mastoidectomy was performed Much to our surprise while the mastoid was hemorrhagic not a drop of pus was encountered none being found even in the antrum However, recovery was prompt following the operation

Here everything was positive, including the roentgen-ray findings, yet operation showed how erroneous was this all But doubtless this was another borderline case, and would have gone to suppuration later The operation was conservative, in that it brought relief

There is no question in my mind of the value of roentgenograms in suspected mastoid abscess In most instances, well-taken roentgenograms give positive evidence that is invaluable in aiding the surgeon in determining whether or not operation is necessary, although these pictures sometimes may prove misleading, as in the case just cited But no otologist should neglect to have such pictures made whenever possible, not only for their diagnostic worth, but also as operative guides However, the absence of positive roentgen-ray findings should not lull us into a sense of security which may be false, and cause us to fail to give the patient the benefit of opportune surgery Clinical symptoms must in the final analysis be our most dependable guide, even though at times we err to the extent of performing what may appear to have been an unnecessary operation

Here let me briefly relate the details of a case which is almost amusing from a diagnostic standpoint, but had its very serious aspect to the patient

CASE 5—Mrs B, aged 30 consulted me, Oct 10, 1919, with reference to the condition of one of her ears, which six days before developed an abscess which burst and discharged for three days She had been suffering a great deal with this ear even after it began discharging She was much alarmed, because some six weeks before having then an abscess in each ear, she had consulted a specialist in a nearby town and after making roentgenograms of both mastoids, he told her that she had an abscess in each mastoid, was in imminent danger of her life and must urgently have both mastoids opened and drained

There was no pus in either ear when I saw this patient, and no mastoid symptoms I had pictures made of the mastoids, and they showed absolutely normal mastoids

To return to the symptomatology, the first of these cases which I have outlined presented a typical and classical syndrome of suppurative mastoiditis It is true that in this case the roentgen-ray findings were negative as to mastoid abscess, but in the presence of such positive clinical symptoms, it would be an extremely conservative attitude that would consent to refraining from operation

In the next two cases, while there did not exist at the time seen an aural discharge, both gave positive evidence of mastoid suppuration, with probable necrosis through the outer table, and the operative revelation of entire absence of mastoid involvement was most astonishing

The fourth case lacked nothing by way of positive evidence, but utterly failed on operation to bear out these findings, or to account for the exaggerated symptoms of an acute suppurative mastoiditis

While none of these cases proved to be what was operated for, that is, a suppurative mastoiditis, still, recovery apparently was hastened by operation, and even with this experience before me, I expect in future to have similar cases which will be handled in the same manner, owing to the fact that even a careful study of such cases, before advising operation, is not always going to eliminate for me the possibility of just such operative findings as I have outlined in the cases described

When we consider the classic textbook indications for operation in mastoid abscess, we can find enough of these in any of the cases reported by me to justify operation, and yet in the light of the experience of any of us, I doubt whether there are not instances in which the classic indications are not borne out by operative findings I am aware of the fact that some claim that, in conjunction with other symptoms, the drooping of the posterosuperior lining of the external auditory canal is always an indication for opening the mastoid, but I am not inclined to stress this symptom too much Case 4 presented this markedly, and I have failed to find this drooping in some cases in which there was extensive suppuration in the mastoid cells, as was operatively demonstrated So it is with other symptoms which are regarded as very positive indications, and which may prove just as misleading These, however, are the exceptions to the rule, and in the final analysis, I think that, after duly weighing all considerations in a given case, it is far safer and better for the patient that the surgeon should abide by the

cardinal principles laid down as indications for operation in these cases, and that it is far better occasionally to open an innocent mastoid than to delay in the presence of the danger, always present, of intracranial complications, which so rapidly may supervene, and result in a fatality that could have been avoided by a mastoid exenteration

Bank of Commerce Building

ABSTRACT OF DISCUSSION

DR FRANCIS P EMERSON, Boston The roentgen ray is as an adjunct in diagnosis, confirmatory of the clinical picture We have often checked up our operative findings with the roentgen-ray diagnosis of what was present in the mastoid, and our experience has been that if you rely on the roentgen-ray findings alone you will open a great many mastoids unnecessarily Another point to be emphasized in connection with mastoiditis is that in probably every acute middle ear inflammation congestion of the mastoid is present There are very few acute mastoids that should be opened before the lapse of a week or ten days from the onset of the middle ear disease In few acute mastoid cases will you lose the patient from not operating soon enough On the other hand, in many cases, especially of the pneumatic type, in which cells extend up over the zygoma and far back over the sinus, if you open the mastoid too early, a long and tedious convalescence follows In the presence of infected bone if you open the mastoid before there is a leukocytic walling off, you are never certain of being outside of the infected area That happens in many cases of mastoiditis where, in our anxiety, we open the mastoid too early If we wait until the process has limited itself, the patient will have a very quick convalescence In a fulminating case, in which the inflammation jumps from one area to another, with no tendency to limit itself, an operation will seldom save the patient Time and again, I have seen a mastoid opened on the basis of the roentgen-ray findings, opened in the congestive stage, with the result that a second operation had to be performed by some one else

DR CULLEN F WELTY, San Francisco An antrum of Highmore that was once infected will throw a shadow that cannot be differentiated from an active infection Doubtless, this is also true of the mastoid if it has been infected I agree with Dr McKinney as to the indications for operative intervention because by waiting the patient may die I believe in early operation Take away all the cells and there is no reaction, the temperature drops to normal and remains normal If temperature or pain persist, you have not taken away all of the cells Always bear in mind the cerebral complications that have existed with the other symptoms prior to operation Cerebral manifestations do not come on so quickly

DR G H MUNDT, Chicago The average acute mastoid case is safe until there is a breakdown of the intracellular septums It is not a matter of having a mastoid full of pus We should have two roentgenograms for comparison The roentgenogram is the most valuable single aid in determining whether or not to open the mastoid

DR WILLIAM B CHAMBERLIN Cleveland The differential diagnosis between acute mastoiditis and external otitis is not easy I have seen patients in the Politzer Clinic waiting for five days for a differential diagnosis to be made Dr McKinney did not, in several of these cases speak of the appearance of the tympanic membrane It is not always easy in external otitis to obtain a sufficient view of the tympanic membrane, and I wonder if some of these cases might not have been an extension from an external otitis rather than an extension along the external canal wall The roentgenogram may be exceedingly misleading anatomically Safety lies in not gaging operative intervention by the roentgen ray but in operating in every mastoid case as if the lateral sinus was as close to the exterior as possible

DR E LEE MYERS St Louis I agree with Dr McKinney It has been my experience since the first epidemic of influenza that too much attention cannot be paid to symptoms In children there may not be any redness of the drum membrane, and yet at operation all the cells are found necrotic I have had two cases of wryneck, one in a child 6 years of age, in which the wryneck was the only symptom There was no redness of the drum membrane, no running ear It proved to be a case of cerebellar extradural abscess Another patient had a perfectly normal ear, as far as acuteness is concerned The roentgen ray showed nothing in the mastoid or antrum It proved to be a fistula of the mastoid squama an inch and a half away from the antrum The fistula was as large as the end of my thumb The dura was protruding

DR RICHMOND MCKINNEY, Memphis, Tenn I realize that there is a possibility of mistaking a large boil for a mastoid abscess, but that was very carefully borne in mind All my patients gave a history of previous middle ear trouble In none of the cases reported was there occlusion of the external auditory canal, and the congested membrana tympani could clearly be seen

THE TREATMENT OF CHRONIC INDIGESTION IN CHILDHOOD*

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Normally the digestive powers are equal to the work demanded of them, that is, the digestion of the food The equilibrium of the digestion may be disturbed either by a decrease in the powers of digestion or by an increase in the work to be done in digestion The decrease in the powers of digestion may be due to the action of diseases other than those of the digestive tract, to overfatigue, either physical or mental, or to diseases of the digestive tract The increase in the work to be done in digestion may be due either to too much digestible food or to indigestible food

The treatment in the first place evidently consists, therefore, in the exclusion or treatment of diseases other than those of the digestive tract and the removal or remedying of all causes of overfatigue, whether it be physical or mental It is surprising how often the source of a chronic disturbance of digestion will be found outside the digestive tract Chronic disease of the tonsils or the accessory sinuses is a very frequent cause of indigestion An unsuspected pyelitis is also not an infrequent cause Success in the treatment of chronic disturbances of digestion due to other diseases evidently cannot be hoped for, no matter how careful the regulation of the diet, until these diseases have been remedied Overfatigue is an even more common cause of chronic disturbances of digestion in childhood than are diseases outside the digestive tract The whole difficulty in many instances is due to overplay, overstudy, overexcitement or too late hours The removal of these causes will almost at once result in the disappearance of the indigestion Until these causes are removed, however, no improvement, or very little, can be expected, even with the most rigid attention to the details of feeding

Incidentally, it is important in all disturbances of digestion, no matter what the cause, to regulate exactly the intervals between feedings, to enforce regularity in feeding, and to forbid the taking of any food between meals It is extremely important to make sure that the child chews its food properly and never washes it down

* Read before the Section on Diseases of Children at the Seventy-First Annual Session of the American Medical Association, New Orleans April 1920

with liquid before it is properly masticated Regulation of these simple matters is, of itself, often enough to cure the milder disturbances of digestion in childhood

Primary disease of the digestive tract is very uncommon in childhood If there is disease of the digestive tract, it is almost invariably secondary to disturbances originating in the contents of the tract as the result of the ingestion of improper food or as the result of bacterial fermentation Treatment in the next place consists, therefore, in regulation of the diet by regulation of the amount of food and by the elimination of indigestible food The application of these general rules as to the regulation of the diet is all that is necessary in many instances, and certainly in the majority of the milder cases of chronic indigestion in childhood

In other cases, however, and certainly in most of the more serious disturbances of digestion, the conditions are more complicated There is an intolerance, more or less marked, for one or perhaps two of the individual food elements This intolerance is usually the result of overfeeding with this element in the past In the severer cases, intolerance for one or more of the food elements is almost always associated with fermentation in the intestinal contents as the result of abnormal bacterial activity This fermentation may take place in any of the food elements, fat, carbohydrates or protein Chronic indigestion in childhood may, therefore, be divided into indigestion with intolerance for fat, indigestion with intolerance for sugar, indigestion with intolerance for starch, indigestion with intolerance for protein, and indigestion with fermentation The borderline between simple indigestion with intolerance for one or more of the individual food elements and indigestion with fermentation is necessarily somewhat indistinct, because there is always fermentation going on normally in the intestinal contents The line between normal fermentation, fermentation with simple indigestion, and indigestion with excessive fermentation must evidently be very indefinite

SYMPTOMS

All types of chronic indigestion in childhood have certain general symptoms in common, such as loss of weight and other manifestations of disturbed nutrition Among these are dryness of the skin and hair, cold extremities, pallor, irritability, peevishness and disturbed sleep Other symptoms, which vary according to the type of indigestion, are diarrhea, constipation and the alternation of diarrhea and constipation The abdomen may be distended, normal in size or sunken, there may or may not be vomiting, fever of varying degrees may or may not be present None of these symptoms, are however, definite enough of themselves to justify a positive diagnosis as to the type of indigestion

DIAGNOSIS

While something may be told from the condition of the bowels, the odor of the breath, the condition of the tongue, the presence or absence of gas, nausea and vomiting, and the history in general, the diagnosis must be made mainly, however, on the results of the examination of the stools, as the different types of indigestion have characteristic stools The macroscopic examination of the stools is often sufficient to justify a positive diagnosis as to the type of indigestion present It should never be depended on alone, however, but should be verified by a microscopic examination, because the microscopic examination will sometimes show that the conclusions drawn from the macroscopic examination were not justified The microscopic examination of the stools should, therefore, always be made This is not a difficult matter and requires but a few minutes

A small portion of the stool is spread on a slide and stained with either Lugol's or Gram's solution Starch granules stain blue or violet Another portion is spread on a slide and stained with a saturated alcoholic solution of sudan III The neutral fat drops and fatty acid crystals stain red Soap crystals do not stain with sudan III A drop of glacial acetic acid is then allowed to run under the cover glass The specimen is then heated until it simmers This changes the soap into fatty acids, which then stain If it is desired to determine whether the fat is in the form of neutral fat or fatty acids, another specimen is stained with carbolfuchsin This does not stain neutral fat, but stains fatty acids a brilliant red and soaps a dull red [1]

The bacteriologic examination of the stools is not usually necessary, but in certain cases is absolutely essential, as a positive diagnosis is impossible without it

THE STOOLS IN INDIGESTION

The stools vary decidedly in the different types of indigestion

Fat Indigestion—The stools are usually large, semisolid, gray, acid in reaction, and often contain a considerable amount of mucus They are sometimes dry, hard and gray or white More often they are loose, frothy, gray and extremely acid The odor is that of butyric acid, and they contain considerable amounts of mucus Sometimes the fat is in the form of small, soft curds, or the stools appear oily, as in babies Microscopically, the fat is present in various forms, rarely as neutral fat, more often as fatty acids or soap

Sugar Indigestion—The stools are loose, yellow, sometimes green, frothy and acid in reaction The odor is that of acetic or lactic acid The stools are very irritating to the skin, and often contain mucus Microscopically, little abnormal is seen, except that sometimes, as the result of the diarrhea, they show unabsorbed fat and undigested particles of food which have been hurried through the intestine

Starch Indigestion—The stools are loose, yellow-brown, sometimes green, often frothy, and acid in reaction The odor is acid, usually being that of acetic or lactic acid, but sometimes, if there has been a change in the starch to fat, that of butyric acid If very acid, the stools are irritating to the buttocks, but usually are not They occasionally contain mucus and almost invariably considerable amounts of starch, either unchanged or partially converted into dextrin

Protein Indigestion—The stools are loose, brownish, and alkaline in reaction The odor is foul or musty They usually do not contain mucus

Indigestion with Fermentation—The characteristics of the stools are the same as in the other types of indigestion, with the addition of those due to the fermentation They are likely to be frothy and to contain more mucus The acidity or alkalinity of the reaction is increased, according to the type of fermentation present, and the odor is more acid or putrefactive

BACTERIOLOGY

In general, the bacteriologic examination of the stools is not of great importance in diagnosis

1 Further details are given by Morse J L and Talbot F B Diseases of Nutrition and Infant Feeding, New York, the Macmillan Company, 1920 p 94

Usually, no additional information is obtained from it The intestinal flora is, of course, either fermentative or putrefactive, that is, one which forms acids or alkalis from the intestinal contents The type of the intestinal flora can always be determined from the reaction of the stool In the acid stool of carbohydrate indigestion, however, the presence or absence of organisms of the gas bacillus group is of considerable importance in indicating the form of treatment The determination of the presence or absence of the gas bacillus by the fermentation test is not difficult, and can be carried out by any one in his office without special training [2] In protein indigestion there is an excess of putrefactive organisms Porter and his co-workers [3] have recently developed a method for the recognition of this type It is very possible that organisms of the butyric acid group or *Bacillus acidophilus* may be of importance There are, however, no easy methods for recognizing these organisms and no specific treatment, if they are present

TREATMENT

There is no place for the so-called digestants in the treatment of chronic indigestion in childhood There is probably never an insufficiency of either hydrochloric acid or pepsin and, as pancreatin is destroyed in the stomach, it cannot possibly be of any use The general methods of treatment have already been mentioned Further treatment, therefore, consists primarily in regulation of the diet to fit the digestive capacity of the individual child The element or elements of which it cannot take care must be cut down to the point where it can take care of them This point can be determined only by the examination of the stools The deficiency in calories, brought about by the cutting down of the amount of one or more of the food elements, must be made up by increasing the amount of the others The amount of the element that is causing the trouble must be increased as fast as the increasing tolerance will allow It is not enough in severe cases of chronic indigestion, due to intolerance of one or more of the food elements, to give general directions as to the diet The diet must be laid out explicitly, and the number of grams of the offending food element allowable daily must be definitely stated The number of calories which the child needs must also be indicated A list showing the caloric value and the content in grams of the various food elements in the foods allowed must be given to the parents and its use explained In my experience, almost all parents are intelligent enough to use these tables I have had no difficulty in getting their interest and cooperation

In the cases in which there are marked clinical evidences of fermentation, bacteria undoubtedly play an important part in the production of the symptoms They unquestionably also play a part in the cases in which the evidences of fermentation are less marked, because bacterial fermentation is always going on in the contents of the gastro-intestinal tract under both normal and diseased conditions What proportion of the symptoms in a given case is due to bacterial fermentation and what proportion to disturbance of the chemical processes of digestion is, however, almost impossible to determine It is impossible, moreover, to know whether the trouble was originally due to bacteria or to disturbance of the chemical processes of digestion In general, however, it is probable that the difficulty was not originally due to bacteria as it is impossible to implant permanently any organisms in the intestine by giving them in the food Fortunately, it is not important to know which is primary, because the two factors are finally active in every case

Whether primary or not, however, abnormal bacterial activity must be stopped It is impossible permanently to change the intestinal bacterial flora by giving bacteria by the mouth, although the flora may be temporarily somewhat modified, if the bacteria are given continuously The intestinal flora can be changed by changing the composition of the food, that is, the flora may be changed from the acidophilic to the putrefactive by changing the composition of the food, and vice versa Cutting down the proportion of the carbohydrates and increasing that of the protein in the food changes the flora from fermentative to putrefactive, and cutting down the proportion of protein and raising that of the carbohydrates changes it from putrefactive to fermentative This can be proved by bacteriologic examination of the stools, but is shown equally well by the change in the reaction of the stools, the stools being acid when the bacterial flora is mainly fermentative, and alkaline when it is mainly putrefactive Organisms growing on fat have relatively little to do with fermentation in the intestinal tract, but the products of their activity increase the acidity of the stools Treatment by regulation of the diet on the indications furnished by the examination of the stools thus not only aids the weakened digestive powers but also changes the bacterial flora

When the organisms of the gas bacillus group are the cause of the fermentation in the intestinal contents, something may also be done to limit their activity by the administration of organisms that produce lactic acid The best type for this purpose is probably *Bacillus bulgaricus* It is more effective when given in the form of buttermilk than in tablets or cultures, because it is numbers that count, and there are infinitely more organisms in buttermilk than in any tablets or little tubes of cultures Furthermore, the buttermilk contains considerable amounts of lactic acid, which is of itself inimical to the growth of the gas bacillus and putrefactive organisms The lactic acid forming organisms are also sometimes of benefit in the treatment of putrefactive conditions It must be remembered, however, that the lactic acid organisms cannot change the bacterial flora permanently This can be done only by so changing the diet as to change the character of the culture medium in the intestine It is doubtful whether the growth of other pathogenic organisms can be influenced by the administration of any other organisms in the food

There is no place for drugs, except for the temporary relief of symptoms, in the treatment of chronic indigestion in childhood Cure can be brought about only by regulation of the life and diet In severe cases the most minute attention to every detail is absolutely essential In these cases recovery is a matter of many months, and often of years, while relapses are frequent Recovery is, however, almost always possible, provided the treatment is carefu[illegible] and [illegible]t [illegible] a sufficiently long ti[illegible]

2 Morse J L, and Talbot F B Diseases of Nutrition and Infant Feeding p 306

3 Porter L Morris G B and Meyer K F Certain Nutritional Disorders of Children, Associated with a Putrefactive Intestinal Flora Am J Dis Child 18 254 (Oct) 1919

ABSTRACT OF DISCUSSION

DR LEWIS WEBB HILL, Boston I have seen many of these patients treated by Dr Morse His results are equaled by few, partly because he has had a great deal of experience, but mostly because he is willing to take infinite pains That is the most important thing to remember in dealing with these chronic feeding cases, to take time with them, to pay the closest attention to details and to see the child often Even then you will often not get nearly as good results as you would like to get The relation of the intestinal bacteria to the food in the intestine must be considered Escherich, in 1886, first brought forward the very important fact that the types of intestinal bacteria were dependent almost entirely on the food supply, and that if you changed the character of the food supply, the kinds of bacteria in the bowel could be changed accordingly He distinguished between two broad groups of intestinal bacteria, the putrefactive, which live on protein food and the fermentative which live on carbohydrate food If the intestine is infected with fermentative, carbohydrate splitting bacteria, withdraw the carbohydrate food on which they live and substitute protein food, in order to do away with the type of bacterium that is causing the trouble If the intestine is infected with putrefactive protein splitting bacteria withdraw the protein food and substitute carbohydrate food, in order to change that type around This conception is most important in infant feeding not only in cases of chronic indigestion in older children, but in the case of babies as well There is absolutely no use in dealing with these cases to try to temporize One should figure out very accurately what the child is going to have, and give the mother an ironclad diet list All directions should be written I use a card about five by eight inches, with the meal times written on it breakfast luncheon dinner and supper, and then I put down under each one of those headings exactly what the child is going to have for each meal That helps a great deal The mother can tack it up in the kitchen or pantry, and follow it from day to day When the diet is changed a new card can be given Never give dietary directions by word of mouth for such cases as these, always write out the directions Trust nothing to the judgment of the mother

DR C G GRULEE, Chicago Dr Morse has made an ironclad statement, that you cannot introduce bacteria into the bowel by giving them by mouth That statement should be questioned I do not know how you are going to account for a certain phenomenon unless you admit that bacteria when introduced by mouth do show evidences of growth in the intestine Typhoid is caused by the introduction orally of the typhoid bacillus and certain types of dysentery are caused by the introduction by mouth of certain types of the dysentery bacillus I suppose Dr Morse meant to say that by the introduction of the lactic acid bacillus by mouth we could not obtain any therapeutic results in the intestine My experience has been rather contrary to that It is very hard to say in a given case to what results are due because you will probably use several therapeutic agents, but there is no scientific reason why the lactic acid bacilli introduced by mouth cannot be taken up in the intestine Dr Morse may say that the gastric juice is bactericidal in action It probably is, under normal conditions, and under abnormal conditions it probably is not The latest bacteriologic results, as obtained by the duodenal tube, and examination of the gastric contents, show that there is a very definite relation between the bacteria found in the stomach and in the duodenum, with the various types of nutritional disturbance

DR L T LE WALD New York I endorse everything Dr Morse said My work in studying children has been along the line of the roentgen-ray diagnosis in cases of indigestion which do not yield to ordinary methods of treatment Unless one takes into account some of the congenital anomalies of the gastro-intestinal tract treatment of what is considered a digestive disturbance will fail to relieve There may exist a definite obstructive lesion, that can only be dealt with by knowing the exact nature of the mechanical obstruction In a case of persistent vomiting we found a congenital hernia of the diaphragm, with the stomach in the chest cavity, and part of the time some of the stomach would protrude into the abdominal cavity, and produce a partial obstruction, and at other times it would slip entirely up into the chest cavity, and the child would go on without any vomiting for a period of several weeks or months That condition of recurrent digestive disturbance was immediately explained by the roentgen-ray examination, and was relieved by an anastomosis between the stomach and the small bowel, the only case on record in which the condition has been successfully relieved by a palliative operation of this sort A case of congenital syphilis of the stomach, with a very marked narrowing of the entire stomach lumen, would never have been recognized in any other way

DR ISAAC A ABT Chicago I agree with everything Dr Morse said I was particularly impressed by the fact that he recognizes that indigestion may be produced by constitutional disturbance I doubt whether there is such a condition as indigestion pure and simple I believe that indigestion is but one step in the general metabolic disturbance If you are dealing with a baby who is suffering from an excess of starch, he first possibly has indigestion but very soon he has some more profound constitutional disturbance He has an injury produced by starch that may show itself either as an atrophy, or possibly with a general hydremia, so that I doubt very much whether one should stress entirely the indigestion without considering the nutritional side the general metabolic disturbance It is not such a complicated matter to cure or to remedy these food disturbances It is simply a matter of finding out what the difficulty is, and diminishing the amount of food ingested, or altering the character of the food entirely Examination of the stools in my experience is not the most important element in diagnosis A little fat may be found in a perfectly normal stool, or a little starch even, without producing any pathologic symptoms

DR JOHN LOVETT MORSE, Boston If I had read the whole of that part of my paper dealing with bacteriology, I do not think that Dr Grulee would have criticized I do not think that his arguments apply I was talking about bacteria in the intestinal contents Typhoid fever is a systemic infection and in infectious diarrhea the bacteria invade the intestinal wall I am still prepared to defend my statement that it is impossible permanently to implant any bacteria in the intestine They will stay only as long as they are given unless the diet is changed If the diet is changed, it is not necessary to give them As to the examination of the stools If the findings in the stools are interpreted correctly, they are often of great assistance If the examiner thinks that a few fat globules mean fat intolerance or a few starch granules intolerance for starch, he will be misled The child the diet the number of stools and the life must also be considered That is, brains are necessary here, as elsewhere, in medicine

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Infant Welfare and the General Practitioner—There is no reason why the average practitioner who is always an obstetrician and pediatrician as well, should not conduct a well-baby clinic in his private work as an integral part of his practice There is no reason why he should deny the new-born child that measure of medical supervision which to a greater or less degree he accords the mother during the nine months preceding the birth of the infant The goal of good obstetrics should be not only the delivery of the living child but that the child should continue to possess the attribute of living Prenatal care by the average practitioner, even if many times indifferent and inefficient is recognized by him as an inherent right of the expectant mother Equally rightful is the prerogative of the infant during its precarious first year to have its share of medical supervision The socially-minded individual is largely so through instinct Like poets, and to be more concrete like the successful public health nurse they are born and but rarely made Yet the dormant and potential social instinct may be awakened into a dynamic force through stimulation and cultivation—J S Wall *Am Child Hyg A Tr* Nov 11-13, 1919

MANAGEMENT OF ACUTE APPENDICITIS DEVELOPING IN LATTER WEEKS OF PREGNANCY

REPORT OF CASE TREATED BY CESAREAN SECTION AND APPENDECTOMY *

NORBORNE PAGE COCKE, M D
AND
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BIRMINGHAM, ALA

For the purpose of discussing the various questions which arise in the management of acute appendicitis occurring at or about the termination of pregnancy, the following case, developing within the last three weeks of pregnancy, treated by cesarean section and appendectomy with drainage, is reported

REPORT OF CASE

Mrs F W, aged 25, primigravida married two and one-half years, was first seen in October, 1919, after having passed through six months of pregnancy uneventfully Her last period began on April 21, 1919 and labor was expected between Jan 25 and 28 1920 The past history was unimportant except that the patient had always suffered from slight indigestion, but never from any pain or other symptom referable to the appendix Physical examination and pelvic measurements showed her to be normal in every way Oct 29, 1919 she developed headache, nausea, 'heartburn" vertigo and blurring of vision The urine contained a small quantity of albumin and a moderate number of hyaline and granular casts The systolic blood pressure was 115 There were slight pains in the lower part of the abdomen She was kept in bed on milk diet and was subjected to free purgation All symptoms cleared up rapidly, and on the tenth day the urine was free from albumin and casts The systolic blood pressure registered 100 The attack was considered to have been one of toxemia of renal origin

January 4 patient was awakened about 1 a m with nausea and vomiting, she was seen at 4 a m The pulse and temperature were normal, she complained of slight pains over the lower abdomen, uterine contractions could be seen and felt There was no vaginal discharge She was given ⅛ grain of morphin sulphate and 1/200 grain of scopolamin hydrobromid hypodermically, and soda water by mouth

At 9 a m, vomiting was persistent and severe, the temperature and pulse were normal, no tenderness was elicited over the abdomen, but the patient complained of intermittent cramping pains Milk of magnesia, one-half ounce, was given, and this was followed by a soapsuds enema with only fair results The systolic blood pressure was 105, the urine showed a few hyaline casts but no albumin, the leukocyte count was 21,000 The vomiting continued throughout the day, and by 9 p m the temperature was 99 2 and the pulse, 110 The cramping pains were still present

January 5 at 9 a m, all symptoms had improved except the vomiting The vomitus contained bright red blood and intense burning was complained of along the course of the esophagus In the evening some tenderness was noted in the right lower quadrant of the abdomen and the leukocyte count was 22 000 Vaginal examination revealed the head well down in the pelvis, with the os thick and admitting only one finger

The continuation of vomiting with a high leukocyte count and the absence of definite onset of labor together with a tendency to locate pain in the right iliac fossa raised the question of appendicitis

On the morning of January 6, the temperature was 99 and the pulse, 90 There was no abdominal pain or tenderness The vomiting had continued, however and the leukocyte count was 21,500 The urine was still free from albumin, it contained only a few casts and no pus or blood

At 3 p m a consultation was held After considering the history and after careful examination with findings about the same as noted above, we made this analysis of the situation

1 Although the patient had suffered from toxemia of renal origin two months before the present urinary findings did not justify such a diagnosis at this time

2 The persistent vomiting, with high leukocyte count, and with a tendency to refer pain and tenderness to the right iliac fossa was very suggestive of appendicitis even in the absence of material elevation of temperature or increase in pulse

3 The patient's general condition, with incessant vomiting, demanded the termination of the pregnancy

4 We decided on cesarean section to be followed by examination of the appendix with its removal if found diseased

At 6 p m January 6 sixty-six hours after onset, under gas-oxygen anesthesia the uterus was delivered and carefully packed off from the abdominal cavity The fetus was extracted the uterine wound closed, and the uterus returned to the abdomen and still further protected by packs The abdominal incision was retracted and the appendix located well down in the pelvis It was acutely inflamed, almost gangrenous covered with lymph but free from adhesions The appendix was removed a large cigaret drain was carefully placed through a stab wound in the right iliac fossa, and the laparotomy wound was closed

The patient made an uneventful recovery

IMPORTANCE OF PROMPT OPERATION

The frightful mortality of neglected appendicitis is recognized by every one, and the advisability of prompt operation on the development of an acute attack in the nonpregnant patient needs no discussion at this day

The higher mortality which has been attributed to acute appendicitis during pregnancy is not to be charged to the appendicitis or to the pregnancy so much as to the failure to recognize the disease promptly and to treat it along well established surgical lines

The failure to recognize the disease in the latter months of pregnancy may be due to difficulty in diagnosis, which is brought about by the enlargement of the uterus, with attendant changes in the relations of the intra-abdominal organs

The delay in prompt operation is most often due to the obstetrician's hesitancy in undertaking any serious operation which may be followed by abortion or premature delivery, and, to a very great extent, to the attitude of those obstetric teachers, who, until recently, have held that while operation is indicated in all cases occurring in early pregnancy, only in perforative or gangrenous cases should operation be performed during the last four months

No teaching more dangerous to the pregnant woman with appendicitis could be held, and we heartily approve the position of De Lee,[1] who states in his latest work that "appendicitis during pregnancy should always indicate immediate operation, and that even in cases of doubt, operation is the safer course," of Kelly [2] that "because of the well recognized clinical severity of any attack of appendicitis associated with suppuration during pregnancy, prompt interference is demanded as soon as a diagnosis is clearly made," and of Hirst,[3] who urges prompt operation and points out that "if an attack occurs late in pregnancy, in con-

* Read before the Section on Obstetrics Gynecology and Abdominal Surgery at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 De Lee J B The Principles and Practice of Obstetric Philadelphia W B Saunders Company 1915

2 Kelly H A and Hurdon Elizabeth The Vermiform Appendix and Its Disease Philadelphia J B Lippincott Company 1909

3 Hirst B C A Text Book of Obstetric, Ed 7 Philadelphia W B Saunders Company 1912

sequence of intense congestion and increased intra-abdominal pressure, it is likely to be very severe, with early virulent peritonitis" Findley,[4] in a paper before this section in 1912, quoted the statistics of Wagner, who gives the mortality in nonoperative severe cases complicating pregnancy as 77 per cent, as contrasted with 67 per cent in cases of all grades of severity in which operation is performed within the first forty-eight hours, and expressed the belief that reduction in mortality would no doubt occur if these patients were operated on within the first twenty-four hours

John B Murphy, in discussing Findley's paper emphasized two facts First, when the condition was diagnosed early and remedied early the mortality was almost nil, second, when the condition was diagnosed late the endeavor to remedy was also late, the mortality was colossal He pertinently asked "If we can diagnose the condition early, what is the excuse for waiting?"

In the earlier months of pregnancy, appendicitis is not infrequent, its diagnosis offers no special difficulties, and operative technic does not differ from that employed with the nonpregnant Abortion occurs very infrequently, and there is little likelihood of its happening with the patients operated on early, without drainage, and with the minimum amount of intra-abdominal manipulation

Reported cases of acute appendicitis developing at or very near the end of pregnancy or with the onset or in the course of labor are rare, and the difficulties of diagnosis may be great

CASES IN THE LITERATURE

In reviewing the literature as found in the abstracts of THE JOURNAL since 1912, only four such cases are noted, and only two of these are abstracted or reported in full

In Wallace's case[5] at full term pregnancy, the attack began on Saturday night and was thought to be the onset of labor, on Sunday afternoon appendicitis was diagnosed, on Monday at 1 30 p m, about forty hours after onset, the perforated appendix was removed and drainage was instituted On Tuesday at noon, twenty-two hours after the operation, labor set in and was completed at 12 30 Uneventful recovery took place

In Grattan's case,[6] in which the expected date of confinement was July 18, the onset of the attack occured at 1 a m, July 15, with epigastric distress, at 7 a m, July 17, abdominal pain in the right iliac fossa caused suspicion of appendicitis, also at the same time definite dilation of the cervix, with characteristic intermittent girdle pains indicated the onset of labor Operation was performed, 12 30 a m, July 18, about seventy-two hours after onset, a gangrenous appendix was removed, with drainage of the abdomen Labor pains came on half an hour after the regaining of consciousness, and labor was completed at 10 a m, the 18th The mother recovered after a very stormy convalescence, but the baby died

PROBLEMS THAT ARISE

When appendicitis develops at or near the end of pregnancy, several serious problems arise (1) that of diagnosis, (2) the question of operation, (3) whether or not pregnancy shall be terminated, (4) the question Is the better plan to empty the uterus before removing the appendix, or to remove the appendix first? (5) What method shall be employed in terminating pregnancy?

Diagnosis—Some time must inevitably be lost in deciding that any pain present is not due to the onset of labor alone, but may be due to some cause outside the uterus By careful examination, one must exclude hematogenous infection of the kidney, pyelitis, ureteral obstruction, gallbladder disease, and inflammatory affections of the appendages Repeated observations must be made of pulse, temperature and leukocytes Any tendency whatever to refer the pain to the right iliac fossa, or the eliciting of any tenderness or rigidity in this region, must be given special weight in view of the fact that these signs are frequently obscured by the increased size of the uterus

Operation—From what has gone before, we have made our position clear that operation is indicated when a diagnosis has been clearly made In some instances, operation will, of necessity, be exploratory in character and may have to be undertaken on the ground that severe, persistent abdominal pain, not relieved by the usual simpler remedies, demands operative investigation, bearing in mind the opinion of De Lee, already quoted, that in case of doubt operation is the safer course

Shall Pregnancy Be Terminated?—At this late period, the life of the child is not endangered by terminating pregnancy, and we believe that this should be done

Neither Cragin[7] nor Williams[8] favors the emptying of the uterus from above or below in dealing with the appendix

Hirst[3] thus states his position

> If there is any reason to suspect suppuration the median incision is required in operating after the fourth month and the uterus should be lifted out of the abdominal cavity to detect possible areas of suppuration deep in Douglas' pouch or on the left side If it is necessary to deliver the uterus from the abdomen after the seventh month it should be emptied by cesarean section before it is returned If drainage is required, the uterus should usually be amputated

As to whether the uterus should be emptied first or the appendix removed, it seems to us better to terminate labor first and remove the appendix immediately thereafter All writers agree that the removal of an appendix in the presence of the full term uterus is usually very difficult Furthermore, if the placing of the drains is necessary, the subsequent change in intra-abdominal relations brought about by uterine contractions, and by the diminution in the size of the uterus after delivery, may so disturb the operative field as to cause the spread of infection to all parts of the abdomen, while the maintenance of a quiescent condition would allow the formation of protective adhesions with subsidence in intraperitoneal inflammation With the uterus empty and contracted, the appendix may be located and removed with greater ease, and there will be but little danger from interference with the peritoneal toilet after the operation is completed

Method by Which Pregnancy Shall Be Terminated—No slow or uncertain method should be employed While a slowly induced labor is in progress, suppura-

4 Findley Palmer Appendicitis Complicating Pregnancy, J A M A 59 612 (Aug 24) 1912

5 Wallace C J Ruptured Appendix at Full Term Pregnancy J A M A 64 739 (Feb 27) 1915

6 Grattan J F Gangrenous Appendicitis Coincident with Labor Surg Gynec & Obst 29 457 (Nov) 1919

7 Cragin E B The Practice of Obstetrics Philadelphia Lea & Febiger 1916

8 Williams J W Obstetrics New York D Appleton & Co 1917

tion and peritonitis may be progressing much more rapidity If the patient is a multipara and the obstetrician is sure that he can accomplish delivery promptly by accouchement force, this may be considered If the patient is a primipara, or if there is any doubt about immediate delivery in the multipara, cesarean section, with appendectomy, should be performed

CONCLUSION

We are entirely opposed to the teaching that operation in the latter months of pregnancy should be reserved for perforative or suppurative cases

The pregnant woman at this period of pregnancy should be given the same chance of recovery that is offered the patient who develops appendicitis in the earlier months, namely, an early diagnosis and prompt removal of the appendix, not after but before perforation, gangrene or peritonitis has developed

Jefferson County Bank Building

ABSTRACT OF DISCUSSION

DR ARTHUR H CURTIS Chicago I agree with Dr Mason that every actively diseased appendix must be removed irrespective of the stage of pregnancy Not only the acute appendix, but every appendix should be removed, because one never can tell when serious complications may arise As to the advisability of performing a cesarean section on these patients If the appendix is accessible, in the absence of distinct contraindications for cesarean section, I would be inclined to leave the uterus without manipulation I see no reason why if we close the abdomen thoroughly and carefully, labor should not go on in a normal way If we perform cesarean section we are apt to have trouble from unsatisfactory closure of the uterine or abdominal incision In such cases it would be a pretty good plan for the doctor to consider local anesthesia If ever there is need for local anesthesia, it is in such cases as these If we decide not to take out the fetus and if the uterus is left alone, we should be extremely careful in the closure of the abdominal wound Under such circumstances it is best to use strong tension sutures

DR FRANCIS LE S REDER St Louis It is well to give instructions to the woman who expects to become pregnant to subject herself to the most thorough examination before conception occurs If there are any evidences of former attacks of appendicitis, it is better to remove the appendix in the interim than to allow her to go on and take this risk Up to the fourth month of pregnancy the appendix can be removed with comparative safety no matter what its condition From the fourth month to the seventh month there is some danger From the seventh month on, the situation is a very complicated one and calls for the exercise of good judgment on the part of the attending physician in determining the treatment It has been my experience that appendicitis at this time in a pregnant woman is not of the same virulence as when it occurs prior to that time Although I have urged operation in a number of such cases, it was declined and these women went on to full term without any untoward consequences If it is extremely dangerous to this woman s life to allow the condition to go on what should be our method of procedure? I am inclined not to be hasty, to watch and wait as long as the patient remains within the limits of safety as far as your surgical judgment will dictate no surgical intervention becomes necessary If the case goes on to suppuration, and the pus can be palpated in the culdesac of Douglas, puncture through the rectum and evacuation of the pus, will sometimes suffice and not disturb the pregnant uterus I have had two successful cases treated in that way Ventral hernia is a secondary matter The safety of the woman must be considered primarily The hernia can be repaired later when the woman is in a safe condition for such repair

DR DAVID ROSS, Indianapolis Whether to operate for appendicitis during pregnancy is a matter of individual judgment However, what impressed me most in the paper was the suggestion to do a cesarean section in cases of rupture of the appendix Some years ago the late Dr Beckman answered the question 'When is it safe to do a multiple operation?' by saying that he could tell better when it was safe not to do one He advised never to operate in the presence of an infection or even when infection was suspected I certainly would not submit any woman to a cesarean section in the presence of a ruptured appendix

DR JAMES M MASON Birmingham Ala One-half the textbooks on obstetrics advise that when appendicitis occurs early in pregnancy the appendix should be removed the other cases should be left alone unless suppuration occurs My position is—no matter what the stage of the pregnancy, if appendicitis develops the pregnant woman is in as dangerous a condition as the nonpregnant woman would be No one can tell which appendix is going to rupture and which is not The accepted surgical decision is that patients with acute appendicitis should be operated on as early as possible Murphy said we can diagnose the cases early and we should operate early At the present day cesarean section is exceedingly simple and safe If you get a case of acute appendicitis in a pregnant woman and want to terminate the pregnancy that way it is a simple matter to open the abdomen close the uterine wound remove the appendix and if there is no suppuration close the appendiceal wound Late in pregnancy a few hours before labor is going to come on it is very much safer to do as Hirst says, open the abdomen remove the appendix amputate the uterus with every chance of the patient getting well with free abdominal drainage If you leave the uterus intact and do an appendectomy with drainage there is great risk of labor coming on two or three days afterward and to have a localized peritonitis where the contractions of the uterus may break up adhesions If you do a transperitoneal cesarean section, there is no reason why an extraperitoneal section cannot be done and appendectomy carried out As for the use of local anesthesia it has a great place in cesarean section but gas oxygen especially if the woman is suffering from nausea is the best anesthetic to use Concerning the virulence of the infection, the cases I have seen early in pregnancy were subjected to operation before they were far advanced However Murphy, Kelly Hirst and many others have said that if acute appendicitis develops late in pregnancy we may look for the rapid spread of virulent appendicitis I believe that if appendicitis occurs in the last month of pregnancy termination of labor and removal of the appendix is indicated

CONTROL METHODS IN THE TREATMENT OF DIABETES MELLITUS*

SOLOMON STROUSE M D
CHICAGO

This discussion presents the treatment of diabetes mellitus from a point of view not usually employed in consideration of the subject Diabetes mellitus is a much misunderstood disease, but the difficulties of treatment are often greatly exaggerated Difficulties have arisen mainly for two reasons First, the course of the untreated or poorly treated disease is confounded with the results of treatment, second, metabolic investigations have been confused with practical therapy Modern improved methods of treatment have increased the length of life of the diabetic and have cleared the clinical picture of the disease as treated under improved conditions The improved methods mainly have been applications of the metabolic investigations of laboratory and ward, but successfully to treat an individual case does not necessarily imply knowledge of these investigations if their appli-

* From the Medical Clinic Michael Reese Hospital
* Read before the Chicago Medical Society May 5 1920

cation is understood A patient with diphtheria may recover even though the physician who administers antitoxin never heard of Behring or knew that George Washington died of diphtheria

One reason why the treatment of diabetes has been difficult is the apparently inherent difficulty in conceiving of dietetics as a practical procedure on a scientific basis Diabetes is a functional disease of the pancreas primarily involving carbohydrate metabolism and ultimately extending to the metabolism of fat and protein and treatment depends on the degree of functional impairment A natural analogy to cardiac conditions is immediately seen In aortic insufficiency, for instance, there is no cause for treatment until there is an actual functional disturbance of the heart as evidenced by signs of decompensation, either early exertion dyspnea or a final complete break, perhaps involving all the organs of the body No one would attempt to treat a patient with an aortic diastolic murmur who has no signs of decompensation in the same way as he would treat the same patient two or three years later with a break

The only essential difference in therapeutic principle between diabetes mellitus and aortic insufficiency is that diabetic therapy is practically confined to food, and diet is traditionally more difficult to understand than is digitalis Just as there are methods of control in the handling of cardiac cases, so there are similar, if not identical, methods of control in the treatment of diabetic patients methods of control which are simple and logical, which change the treatment of the disease from a hit and miss affair with uncertain results to a scientific procedure of almost sure results in most instances I shall discuss these methods of control and show by case reports how improved therapeutic results can be obtained by the practical application of some surprisingly simple procedures

IMPORTANCE OF THE HISTORY

Even at the risk of repeating facts known to all, or even of laying undue emphasis on what may seem apparent, experience leads me to say that the first and most important method of control lies in a careful history and physical examination In this respect diabetes differs in no way from other diseases of internal medicine, and yet time and again I have seen treatment of the diabetic undertaken by the physician who had made no effort to ascertain any facts in his history, which from the very nature of things must have influenced his treatment had they been known For example, analysis of case records shows that diabetes in the young is usually the severest type of the disease, but that when the young diabetic has a family history dotted with diabetic relatives his chances are improved Further analysis shows that the later in life the disease starts the milder it is likely to be, and a still more important fact can be brought out from knowledge of the length of time a patient has been sick, the nature of his symptoms, and the kind of treatment he has undergone To emphasize these points, I will cite two cases

CASE 1—A man, aged 22, was seen in February Sugar was discovered accidentally by his father, a physician who noted a markedly increased appetite and increased thirst when the boy came home from college for a vacation The specimen showed a specific gravity of 1 050 an excretion of about 6 liters containing 8 per cent sugar and a trace of acetone The blood sugar was 0 28 per cent Everything pointed to a severe case, but his history showed, first a family history of diabetes, and secondly, a short duration of his own symptoms On the basis of these two facts I volunteered the information that treatment would not be difficult and, indeed, it took only three days to get this boy sugar free and to keep him so

CASE 2—Contrast with this a woman seen several years ago, who on the way from New York developed erysipelas When I saw her she was quite sick, with high temperature, fast pulse and marked toxic symptoms The urine contained more sugar, more albumin, more acetone and more diacetic acid than I had seen in a long time The woman was too sick to give much history, and the natural interpretation of the case would have been that some of her urinary abnormalities had been caused or increased by her erysipelas However, to quote her husband, "she'd had all those things for years and had remained in apparent perfect health despite this abnormal urine" Practical judgment based almost entirely on history then indicated the therapeutic procedure, which was definitely to make no radical changes in the woman's method of living She recovered However, had we not taken the history into consideration, and had we instituted treatment on the procedure indicated by the urinary findings alone, it seems to me we would have spoiled any chances for recovery this woman may have had

PHYSICAL STATUS OF THE PATIENT

In recent years when men have spoken and written of this and that kind of "cure" for diabetes, it has been my experience that dangerous practices have resulted from the indiscriminate use of any particular method for all patients with diabetes It is no more logical to give every diabetic a set of pink and blue pills than it is to give every diabetic the same diet list When starvation first became fashionable other things were neglected, and in the hands of men less skilled than the advocates of the starvation method many a patient with exophthalmic goiter, pulmonary tuberculosis, nephritis or obesity was made definitely worse No treatment of diabetes should ever be started unless everything possible is known about the physical status of the patient The individual with a big reserve of fat offers an entirely different therapeutic problem than the thin, highly nervous woman with tachycardia, or the older person with arteriosclerosis and albuminuria The records of two patients will illustrate how the physical status indicates the proper procedure

CASE 3—A man, aged 50 who had diabetes of five years' standing, had within the last few months lost an undue amount of weight and was coughing Physical examination revealed a rather large area of pulmonary tuberculosis in the right lung He was put in the hospital and his diet was never allowed to go beyond his maintenance level (Mosenthal) He was kept at complete rest and very gradual methods were employed to reduce the glycosuria It took a long time but within four weeks the pulmonary condition was quiescent, the urine was normal, and his general physical condition excellent He left the hospital in better shape than he had been in for years But several months later, in his own Canadian town, he transgressed his diet, and sugar reappeared in his urine To quote the patient's words, the doctor did not examine him but starved him to death The expected happened He became sugar free, but his cough and pulmonary findings increased He lost weight, and when I saw him a month later he was a wreck of his former self

Another case illustrates the value of the physical examination

CASE 4—A stout, highly nervous woman, aged 40 with diabetes of ten years' standing, with albuminuria and acetonuria asked about five years ago that I put her under the starvation treatment The result was a quick and dangerous acidosis, to overcome which glycosuria was again produced, and the patient was in no better condition than before treatment was started A few months ago the same patient was

subjected to an intense nervous shock and decided to enter the hospital for a period of complete rest Because of her excess weight the only food change made was a complete elimination of fat, with the result that she became sugar free, acetone free and albumin free, for the first time in ten years This was unquestionably due as much to the complete mental and physical relaxation of the high tension patient as to the removal of fat from her food

OTHER ELEMENTS TO BE CONSIDERED

If these two factors in treatment, namely, history and physical examination, are clearly understood and their importance not neglected, the rest of the treatment of the diabetic is a matter of careful correlation of clinical condition, food intake, and the results of some simple laboratory findings The identification of the reducing substance as glucose is necessarily the first step in the laboratory work The amount of the reducing substance is even less important than certainty regarding its nature The presence or absence of signs of acid intoxication then follows, and the tests for this are easy clinical matters The sodium nitroprussid and ferric chlorid urinary tests, with or without ammonia determination, give information of the greatest value But supplementary evidence of acidosis can be obtained by use of the Marriott apparatus for testing alveolar air This test is clinically accurate, and is simpler to perform than a stain for tubercle bacilli or even than an accurate white count

As a matter of fact, the treatment of diabetes needs no more elaborate laboratory study than is here outlined As I have already mentioned, we must distinguish between the scientific study of the metabolic disturbance in the disease diabetes and the actual treatment of the individual patient with diabetes mellitus The former requires well equipped laboratories, well trained technicians, and men interested in and anxious to pursue such a study But in practice such a study is actually far removed from the absolute needs of the patient It is true that the advance of knowledge concerning the disease depends on such intensive investigations, but it is not necessarily true that the course of treatment of the average diabetic need be influenced by the lack of opportunity for this intensive work

Nothing has been said concerning blood chemistry, but the study of blood sugar and of other constituents of the blood in diabetes has formed a chapter of the greatest interest and certainly has furnished information of the greatest value Hyperglycemia is always present in a true diabetic when he is passing sugar, and a study of the blood sugar will show that in the course of treatment blood sugar changes are likely to precede urinary changes and in this respect furnish information of actual practical therapeutic value The same thing may be said of a study of the retention products causing acidosis in the diabetic And the blood sugar study has become so simplified of late that it can be carried on in a comparatively easy way in a well equipped office

Although it is not my purpose to extend this discussion into the details of management of the individual diabetic, I will abstract two cases in which therapy was improved by ascertaining relative values

CASE 5.—A lad aged 15, living out of town, who had been under observation for two years and was exceedingly intelligent, found that a sudden drop in his tolerance had occurred which he was unable to explain He sent his diet list and twenty-four hour urine The urine contained sugar, but no acetone bodies Analysis of the diet compared to his tolerance diet when he left the hospital two years before showed considerable excess of fat Within forty-eight hours after entering the hospital the patient became sugar free on exactly the same diet which he had had except that fat was considerably reduced His blood sugar also became normal and he left the hospital in a short time with considerably increased tolerance This case illustrated the necessity of analyzing food intake

CASE 6.—A woman aged 61 with diabetes was operated on for acute appendicitis Statistics show that there is nothing more dangerous to the life of the diabetic than an acute appendicitis The fear of the dangers caused the physicians to give rather large doses of carbohydrates and of alkali in the hope both of avoiding acidosis and of treating it if it occurred The patient developed a pelvic abscess, and had a considerable glycosuria, but no acidosis, and a very marked gastro intestinal upset When I saw her it was perfectly apparent from her history that her diabetes was mild, the urine showed no acetone bodies and the blood sugar indicated that her body was pretty well saturated with carbohydrate the alveolar air determination was normal, and she was vomiting all the food given her The line of treatment was pretty definitely indicated For a period of twenty-four hours nothing was given by mouth except ice pellets the bowels were emptied by an enema, and then she asked for food The urine still showed some sugar greatly reduced however and there was still no acidosis Then her diet was gradually built up but never high enough to produce glycosuria The patient made a complete recovery and left the hospital to all intents and purposes a normal woman with a fairly liberal diet

If I have made myself clear so far, it should be a comparatively simple matter to plan a set of principles for guidance in the treatment of the individual diabetic It will be evident that the first and perhaps most urgent need of proper therapy is individualization of the patient, individualization based on a combination of the data obtained from the methods of control already outlined The patient with a mild case of diabetes will immediately classify himself as one who on an excessive amount of carbohydrate intake passes sugar without acetone bodies and without marked historical or systemic changes The severe case will likewise fall into its class from actual evidence, such as age at onset, rapid course, loss of weight, perhaps difficulty of being rendered sugar free, and clinical and laboratory signs of acidosis The second principle is to get the patient sugar free without producing or increasing an already existent acidosis In the mild case this is done simply enough by attention to carbohydrates, which, gradually reduced, will almost invariably result in an aglycosuric urine In the severe, or even in the doubtful cases, in the presence of acidosis or threatened acidosis, the cautious physician will leave the carbohydrates alone and devote his attention to the fats It is, indeed, surprising how often elimination of fats in the diet results not only in immediate reduction of acidosis, but also in the diminution or even disappearance of glycosuria It is true that some of the more severe cases, already rendered free from signs of acidosis, require the complete absence of food before sugar disappears Any patient, no matter how severe his case, can and should be made aglycosuric And it is only by recognizing the truth of this that it is possible to fulfil the third requirement in treatment, namely, increase in the patient's food tolerance It is a rule of almost absolute certainty that as a diet is reduced, so is it built up

Only one more matter need be discussed, the control of which is as necessary for successful therapeutics of the diabetic as is anything I have thus far discussed the matter of intelligent cooperation by the

patient or by some member of the patient's family If we wish to make any permanent impress on the diabetic's life, we cannot do it by a two or three weeks' stay in an institution, no matter how scientific our efforts or how brilliant our results The patient must be told what is being done for him, and he must understand what is being told There is no use in talking in the language of the laboratory to a patient who understands only the language of the kitchen We must either teach him the new language or translate our Greek into understandable English

CONCLUSIONS

This bird's eye study of the diabetic problem justifies these conclusions

1 The diabetic, like any other patient, must be considered as an individual

2 The history, physical examination and laboratory data are equally important in establishing a basis for treatment

3 Treatment consists of rendering a patient free from sugar and acetone bodies and increasing his tolerance

4 The patient's cooperation is essential to any permanent results

5 Under such a plan of treatment the lives of some diabetics will be saved, of many will be prolonged, and of most will be freed from distressing complications

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RELATION OF ACQUIRED FOOD DISLIKES OF CHILDHOOD TO DISEASES OF MIDDLE LIFE*

C HILTON RICE, JR, M D
MONTGOMERY, ALA

What I am to present is not a hypothesis formulated from a study of case histories, nor is it a set of statistical data gathered to substantiate a preconceived theory It is merely a conclusion that recently unfolded itself in my mind as an illuminating interpretation of general observations of the effect of food on life, first as a general practitioner, who was much baffled by the metabolic disorders of middle life, and later as a pediatrician who observed the tendency of many children to form positive dislikes for certain of the essential foods

The very probable relationship between the food dislikes acquired in childhood and the pathology of middle life, while not capable of immediate scientific demonstration, should, I believe, be borne constantly in mind by both the pediatrician and the internist The general evidence which appears to establish such a relationship is what I desire to present

That which is of great importance in the rational interpretation of the clinical phenomena of nutrition is the background against which such phenomena are viewed Therefore, I shall first sketch the background, then set up the general evidence of observation, and then bring them into focus from a final conclusion

Whatever be the nature of life, for practical scientific purposes the whole of it can be expressed in terms of matter and energy Huxley viewed a living organism as a whirlpool through which there flowed a never-ending stream of matter and energy Certain it is that the flesh of us, created out of the stuff of which our environment is made, is no more than a stabilized system of colloidal matter within which glows the protoplasmic fire of life Visualized against the deep, broad background of biologic chemistry, the human organism becomes revealed as a fearful complexity of interrelated cellular systems, of continuous atomic and molecular activities and energy transformations, of actions, reactions and interactions, between known and unknown catalytic agents, hormones, enzymes, etc

With a speed and orderliness that defy laboratory imitation, the life processes go on so long as the inflow of raw material is unbroken Broadly speaking, to this inflow of raw material, of air, water and food, we give the name nutrition And we pediatricians are nutrition experts, we stand at the headwaters of life, as it were, and observe the quality and quantity of raw material that begins its flow into the new-born We know the effect of food on life We know it better than the internist can ever know it, for we face the simple problem From birth to adolescence we watch the immature human organism mold itself to its food We are not confused by a multiplicity of etiologic factors, as is the internist The baby reflects his diet A balanced diet means a balanced baby, an unbalanced diet, an unbalanced baby

We particularly are familiar with the pathologic condition that comes from the lack of essential food elements And here is a point I wish to stress We know that this pathologic condition is not always the *immediate* effect of a deficient diet Put 100 babies on an exclusive diet of sweetened condensed milk and visualize the result A few will thrive and reach the age of 11 or 12 months before showing signs of malnutrition, others will reach the age of 9 or 10 months in fair health and then show signs of rickets, others will become rachitic as early as the third month, after a few months, one or two may develop scurvy, others will do famously for several months and die suddenly from an acute sugar intoxication, and all along the line from the third month on, a large percentage will sink into a hopeless state of marasmus from persistent vomiting or fermentative diarrhea

These children sicken and perish, not from what they eat, but from the constant lack of essential food elements and the absence of those mysterious "chemical messengers" which are so vitally important in the laboratory of life The effect of these deficiencies is, in most cases, gradual and cumulative, weeks or months elapsing before the infant machine shows serious crippling or a sudden explosion, as in acute sugar intoxication

We know, too, that it is not uncommon to encounter a feeding case that has been malfed to the point at which permanent damage seems to have been done to its chemical machinery, and though the needed food elements are supplied, the capacity for their digestion and assimilation are but partly restored and the child remains a weakling

From observation of the dietary habits of adults and children in general, three facts stand out prominently

1 Almost without exception, the adults and children who possess the red blood and vigor of health are those who eat a variety of foods They may eat

* Read before the Section on Diseases of Children at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

irregularly and consume much of what is commonly called "trash," but their appetites for the essential foods are unimpaired Rarely do I encounter such a healthy adult or child who dislikes milk, eggs, fresh meats or green vegetables The more I have inquired as to the diets of these healthy persons, the more I have noted the almost constant presence of one class of food, the green vegetables Judged from its almost constant seasonal presence in the diets of healthy Southerners, the green vegetable ranks high among the essential foods, probably above milk after the fifth year Certainly, a diet that excludes both green vegetables and milk comes dangerously close to being deficient, if fresh meats are also excluded, I believe that such a diet will lead to serious metabolic disorders if persisted in over long periods of time

2 A great many children, perhaps the majority, appear to be able to while away the between meal hours with ice cream cones and all-day-suckers without impairing their appetites for the essential foods With such children we pediatricians have little to do except to have them pointed out to us as numerous and glaring exceptions to our rigid dietary rules However, we have a great deal to do with the large percentage of children who do not fall into this favored class

In its first year the well fed, rapidly developing baby gets no nourishment except from the breast or bottle His diet is well balanced and he shows all the enviable characteristics of physical and mental equilibrium In the second year he comes into possession of language, of his locomotive mechanism and of the strong desire to taste everything in his immediate environment Then comes the anxious question, What may the baby eat? If parental discipline is strong, all may be well, but if the entire household bows down in idolatrous obedience to every whim of his adventurous palate, the baby comes more and more to satisfy his hunger with those foods that taste best, and so his dietary habits are formed, ranging from mild dislikes for essential foods to alarming perversions

Many times I have seen scrawny, anemic, irritable little children slap aside the life giving foods and cry for candy, pickles, catsup or coffee They possess a craving for these things to the exclusion of all others

Perhaps the commonest type of feeding cases I see is that of children from 4 years up who live almost exclusively on carbohydrates All present varying degrees of the same clinical picture, lassitude, irritableness, secondary anemia and constipation—in short, chronic intestinal indigestion I know in some cases, and have been informed by the parents in others, that the majority of such children were in perfect health in the first and second years of life, with normal appetites and normal digestion But somehow they gradually had turned more and more to the palatable sweets and starches, and developed a mild or positive dislike for milk, eggs, fresh meats or green vegetables

The treatment of these cases is simple enough We need not remove the starches and sweets from their diet Regular feedings and the addition of that which is lacking is all that is necessary to restore health But we know too well the difficulties encountered in a good percentage of such cases, that nothing short of complete and permanent removal from home environment and influences will effect a cure And we know that some of these patients do well for a time, or as long as maternal discipline obtains, and then gradually lapse into their old habits of diet

Most of these carbohydrate children do not suffer any serious impairment of health during childhood Owing to the flexibility and adaptability of youth, they pass into adolescence in fair shape, slightly anemic, perhaps, inclined to be constipated and vaguely conscious of the presence of abdominal viscera that now and again fail to function in their accustomed, automatic harmony

3 A surprising number of sufferers from the diseases of middle life confess to food dislikes that date back to childhood I refer only to those functional and organic disturbances which have no bacterial etiology and which clearly are brought about by some fault in the body metabolism I have questioned many of these "chronics" who haunt the physicians' offices, likewise many adults of unhealthy appearance It is a difficult matter to learn exactly what an adult eats, but comparatively easy to determine his dislikes By getting at their food dislikes I have found that the great majority of those middle aged sufferers I have questioned have lived for years on deficient diets They have always liked the carbohydrates, but eat sparingly or not at all of milk, eggs, fresh meats and green vegetables Many who say they like vegetables refer to potatoes, and those who say they like meat refer only to ham and bacon

CONCLUSION

We are familiar with such pathologic entities as rickets, scurvy, pellagra and beriberi, which result from deficient diets over varying periods of time, but we do not I believe, recognize often enough that the deficient diet is the underlying foundation of more varied and mysterious ills of man than any single causal agent in the whole range of pathology, that of all etiologic factors it is the most difficult to recognize in its masked and remote manifestations, in its gradual, cumulative action on organs and tissues over long periods of time I believe that in the acquired food dislikes of the child, in its early start on an unbalanced diet, in the long continued total or partial absence of essential food elements we see the explanation of many of the metabolic disorders of middle life

I believe it to be highly probable that not a few cases of such middle life affections as hypertension, chronic Bright's disease, visceral ptosis, gastric and duodenal ulcers, etc, are but the remote, graver manifestations of that blighting etiologic factor, the symptoms of which we pediatricians are quick to recognize in their incipiency—the deficient diet Certainly we see quite a few older children who present mild or pronounced symptoms of malnutrition from no other reason than that they have acquired dislikes for essential foods Some of these children cannot be made or trained to eat properly, and pass out of our care If they do not in later life develop serious metabolic disorders, by all the laws of life they ought to

So convinced am I of the ultimate harm that is foreshadowed in the food dislikes of childhood that I have come to view the future welfare of these patients with something of the grave concern with which I look on a valvular heart lesion or a scarlet fever nephritis, for the tendency of such children is to relapse into old habits of diet The carbohydrate diet does not contain the potential elements essential to longevity, nor is the human machine

making its normal life cycle on an unbalanced fuel Just as certain as the child passes into adolescence on a deficient diet and with the first faint blight of malnutrition on him, just that certain will he some day face the internist to learn the rigid conditions under which he may hope to eke out the remnant of a salt-free and joy-free existence

ABSTRACT OF DISCUSSION

DR WILLIAM WALTON BUTTERWORTH, New Orleans Dr Rice presents a new viewpoint concerning some of the disturbances of nutrition While it may be difficult for him to prove his assertions, there is much in his paper to command attention Take rickets, for example While it may not be brought about necessarily by an insufficient amount of food, improper food certainly has something to do with it The results are seen not only early in life, but likewise in later life Then, again, pellagra is believed to be due to certain deficiencies of food, or the active principles which are necessary to proper development Not only is it of slow onset but it may be prolonged in its effect Changes of metabolism may not be very striking at first, but they make such lasting impressions on the organism that permanent results are seen later in life

DR FRITZ B TALBOT, Boston There is no doubt that many of the diseases of adult life find their origin in childhood I have noticed that in a certain group of children there are food dislikes on a good, well balanced diet In my experience, those food dislikes come in certain types of families They come in the type of family in which there is a history of asthma eczema and hay-fever, and sometimes urticaria In those families, of course, we know that we often have idiosyncrasies due to anaphylaxis And we have always to bear in mind, in considering food dislikes, the fact that it may be due to anaphylaxis Do not put a person down as a fool who says that he cannot eat eggs, until you have proved that he is not anaphylactic to eggs

DR MAY G WILSON, New York In 1916 I made a dietetic study in the public schools of New York The results of my study corroborate some of Dr Rice's statements I found that green vegetables other than potatoes, tomatoes and lettuce were absent from the diet In the grades just higher than the kindergarden milk was being left out and tea was being substituted Then still higher condiments were being used The acquired dislike of essential foods is noted as we pass from the kindergarden to the higher grades

DR O M GILBERT, Boulder, Colo It is the almost universal experience when I attempt to outline the diet for my tuberculosis patients to be told that the patient does not like milk or eggs I have become impressed with the fact that this dislike of certain foods must have some bearing on the nutritional factors which predispose to tuberculosis It is true that a few patients have a tendency to an anaphylactic reaction against milk or eggs but with the average person it is only a matter of taking time and using patience and perserverance, to become accustomed to them I have come to disregard almost the likelihood of anaphylaxis, and to insist on the patient gradually adjusting himself to the proper diet Irving Fisher showed the bad effects of excess of protein diet in people past middle life, but to my mind it is well to have the factor of safety, so to speak, on the side of the proteins in the formative period of life And I cannot help but feel that this lack of a proper protein element in our diet is by no means a negligible factor, in the production of this metabolic condition, which predisposes to the development of conditions not only like pellagra, but of tuberculosis

DR C HILTON RICE, JR, Montgomery, Ala The conclusion I presented came to my mind only too recently for me to have kept statistics on it, but I have always had a curiosity as to what people eat, particularly the healthy child and the healthy adult One of the most common diets of children in Alabama, particularly in the rural districts, is bread and syrup The people of the West and North do not see that If it is not bread and syrup, it is too much eating of cakes and candy and ice cream cones between meals, much of the ice cream we get is a mixture of cornstarch and vanilla The eating of sweets between meals destroys the appetite for all food, except sweets and starches These children will eat rice and cereal foods, but they do not like green vegetables They do not like fresh meats Very often they do not like eggs, and in many cases they will not drink milk They have no idiosyncrasies for these foods, because they previously had taken them without harm Mothers and fathers have some fear that the child may have inherited indigestion They say that they never liked green vegetables, that they have not been drinking milk since they were children Some will not even eat butter or anything that comes from the cow I believe that we can look forward and see the effect of food dislikes of childhood, and their relationship to the metabolic diseases of middle life, better than can the internist, who seeks, from fragmentary data, to visualize the past history of his case If he would look back to us, to explain the etiologic factors, we, as pediatricians, could tell him that a certain percentage of children leave us on deficient diet, for no other reason than they never were trained to eat properly—if they don't have trouble, they ought to have it

PLASTIC SURGERY OF THE FACE

TS RECENT DEVELOPMENT AND ITS RELATION TO CIVILIAN PRACTICE *

M F ARBUCKLE, M D
EAST ST LOUIS, ILL

As is well known plastic surgery about the face, especially rhinoplasty,[1] has been practiced for hundreds of years It is my intention in this paper, not to discuss any given operation at length, but to bring to your notice the advancement of this branch of surgery within the last few years, and to suggest that it be more often employed in civilian practice than has been the custom heretofore

The disabilities under consideration may be classified, first, as physical and, second, as mental, the first are actually functional, the disability in the second type of cases is the result of the person's mental attitude toward his disfigurement, and often restricts the activities of an individual sufficiently to reduce his worth to the community to a serious degree We may consider these cases together, we have therefore for consideration such disabilities as are caused by tumors about the face, the removal of which entails much loss of tissue, deformities caused by syphilis, disfiguring scars which usually, by contraction, interfere with proper function of the eyelids, lips, alae nasi, etc, and the loss of eyebrows or part of the nose or ear or of the mucosa and soft parts of the eye-socket, with consequent inability to wear an artificial eye, or of the buccal mucosa, with adhesions and inability to open the mouth properly, or to wear a plate if needed

It was my fortune, while in service, to be detailed to the Queen's Hospital for Facial Injuries at Sidcup, England, where this branch of surgery has been very highly developed and is practiced with, I think, unusual success I have detailed this work with which I am familiar in the British camps, but America is by no means behind in it, as witnessed by the splendid work of Ferris Smith, Blair, Beck, Coughlin, Ingersoll, Arrowsmith, Carter and many others in this country

* Read before the Section on Laryngology Otology and Rhinology at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Keegan D F Rhinoplastic Operations London Balliere Tindall & Cox 1900

This success depends on many factors, prominent among which are abundant material of which the surgeon is in actual control until the work is finished, complete staff and equipment, and close collaboration between the surgical and dental and other departments At Sidcup I learned that it is possible to maneuver skin, fat, muscle, cartilage and bone into new locations at will, with assurance of success in the great majority of instances It is often necessary to do this work in stages Surgical training of the most comprehensive kind is required, also are needed imagination and tenacity of purpose, with ability to draw, pattern and mold, and often much courage to carry out a proposed plan of operation Complete records, such as history, physical examination, photographs and plaster casts, before the operative procedure and before each succeeding operation, and at all times the strictest attention to details, are essential

In supplying tissue to remedy a defect it is of primary importance that a defect be not caused in the region from which the tissue is taken, and that proper environment be afforded the graft while it is becoming established in its new position

In flap grafting, the method of making flaps known as the tubed-pedicle flap [2] overcomes many of the difficulties formerly encountered, such as interference with blood supply and infection, with loss of tissue It also renders it easier to shift flaps without disfigurement In this method two incisions, about 3 inches apart, are made, the intervening skin is dissected up and inverted, the edges are stitched together and allowed to heal, thus forming a tube, the denuded area is covered by approximation beneath the tube, after any necessary undercutting has been done The ends are left undisturbed, the proximal one is located so as to contain the most abundant blood supply available, e g, the superficial temporal artery, and to allow the distal one to reach to its proposed site If branches leading off from the blood supply are blocked, this of course increases the volume of blood passing through the flap After ten to fourteen days the circulation through the tube and flap will have been well established Then the distal end, holding the flap, cut to a pattern made of tinfoil or other suitable material (in exact size and shape of the area to be covered) is dissected up Bleeding should be controlled The flap is now shifted to the desired location

Close coaptation of the entire surface and edges must be had in order to prevent separation by clot and infection and loss of tissue, the edges are best approximated by horsehair stitches placed at close intervals and left from four to eight days As stitches are placed, it is occasionally found necessary either to loosen one or place it in another position, as is indicated by blanching of the skin Surface approximation with this kind of flap usually is good, on account of the fact that the area covered generally is more or less convex

When circulation is well established between the grafted skin and its new lodging place, the pedicle is either utilized to fill in further defect by lifting the former proximal end and turning it around, or else it is severed and returned to its former position

When the tubed-pedicle is utilized as a flap or returned, an incision is made along the line of union of the free edge, and the tube is flattened out In order to prevent contraction of the flap where a covering has been made for a cavity such as the nose, it is necessary that lining be afforded This is done either by reflecting skin edges or by Thiersch grafts Careful massage and local application of heat sometimes is indicated for a few hours after operation Needling also is at times helpful in relieving venous congestion

It is sometimes more advantageous to use a free graft of whole skin, known as the "Wolff graft' Here the graft is cut by pattern to fit, and is sewed carefully into place, covered by tinfoil, and held in apposition for a few hours by a cast of dental molding-compound made immediately beforehand This method frequently is used in covering an area on the forehead where a large flap has been turned down, and closure by approximation alone is not feasible It is also of use in covering small isolated areas in places, such as the tip of the nose

In supplying epithelium to cavities such, for example, as the mouth, the eye socket, eyelids, or the interior of the nose, the Esser [3] operation, modified and much improved by Gillies, Waldron and Pickerell, is the operation of choice The area to be covered is freshened by removal of scar, which usually is present, and by undercutting sufficient to allow the parts to assume the desired position, an exact cast of the raw area is made and allowed to cool in position, it is then covered by Thiersch grafts, the outer surfaces next to the cast, and the cast thus covered is reinserted and held in position from five to eight days Then it can be removed by dividing the stitches which support it, when it will often "pop out," leaving a perfectly lined cavity In order to prevent further contraction of the cavity, it is advisable that a cast of hard rubber be worn for a few weeks This is, of course, to be removed frequently for cleansing, in mouth cases

In some instances it is quite difficult to hold these casts in the desired position about the mouth and nose A well fitting and carefully designed dental appliance cemented to the upper teeth and having an adjustable arm, which is flexible, over which the cast is made, will often overcome this difficulty These must be fully tried out before the operation Free suppuration occurs with these grafts, but they flourish in the presence of pus, and practically always "take"

In replacing eyebrows, care must be taken not to injure the hair follicles They are best taken from the mastoid, and usually show growth in eight to twelve weeks

Frequently it is necessary to replace bone as, for example, in the nose, forehead, cheeks or jaw

Methods of bone-grafting will not be discussed in this paper further than to say that in this type of cases the advance has been great, particularly in jaw injuries The osteoperiosteal graft is of great importance, and probably is available in more instances than any other, particularly when there is great loss of tissue and difficulty in finding anchorage The crest of the ilium is particularly serviceable in ununited fractures of the jaw where there is not great loss of tissue, and where there are good edges to unite with

Cartilage implantation is of great help where loss of bony support has occurred, as in the nose or in the skull, with only soft parts left to cover the dura, or in loss of the malar eminence or margin of the orbit or a part of the auricular cartilage These can be done almost at will

2 Devised by Major H D Gillies R. A M C (J Nat Dental A January 1920)

3 Esser J F Ann Surg 65 297 (March)

Rib cartilage is shaped as desired and inserted either at once or buried in the chest wall, and later on taken out and shaped and put into the desired position

Fat and muscle grafts also are frequently made use of in filling out depressions

The end-results in these cases are so uniformly successful and so very gratifying to both patient and surgeon that I wish to urge the more frequent employment of this line of treatment in these cases

ABSTRACT OF DISCUSSION

DR WILLIAM T COUGHLIN, St Louis When I operate on syphilitics I fear lest things will go wrong, and the accidents are suppuration and sloughing I insist on a course of antisyphilitic treatment before any plastic surgery is attempted on these persons The "mental disability" is worth consideration It is most marked in civilian patients Because there are few in the hospital, they do not see others of like condition I was astonished in war work to see the change in the patients after admission Brought in much depressed, as though it was all over with them, when admitted to the ward with the other patients their attitude changed and they became cheerful Control of a case throughout by one surgeon is important and desirable To attempt to do this without the assistance of our dental colleagues is absurd but the surgeon must direct

The "special" surgeon should have a wide surgical training, and I am glad of the effort being made to have otorhinolaryngology include the head and neck I find it difficult to have patients cooperate They do not want so many operations They want to get through quickly and one cannot get the best results with that kind of work The 'tubed pedicle" is one of the best of flaps Accumulation of blood under the Wolf graft works against its success The Esser inlay is one of the best things the plastic surgeon has gotten out of the war

DR GEORGE M DORRANCE, Philadelphia At the beginning of the war men did not read as they should, if they had they would have known more about transplanting and grafting and would have avoided many mistakes There is practically nothing new in implant surgery In the Crimean War and in the Franco-Prussian War, excellent work was done I do not like the osteoperiosteal graft The best graft of all is the one with a pedicle attached to the subcutaneous or muscular tissues The idea of using cartilage for deformity of the forehead is not correct Fraser used the outer table of the skull and obtained very good results

DR AUSTIN A HAYDEN, Chicago One of the most important steps in the preparation of these patients is to procure very carefully made pictures of the condition present before the operation This can best be done by the man who is going to operate, because photographers invariably try to hide the deformity, which defeats the object of the picture Asepsis is very important Iodin should be used freely inside of the nose and over a considerable area of the face, before an intranasal operation is attempted I have done an intranasal operation It is much harder to get the patient to consent to an operation in which an external incision is to be made

DR FERRIS SMITH, Grand Rapids, Mich I was greatly surprised to hear Dr Dorrance say that there is nothing new about rhinoplasty He has not read much or he would not make that statement The rhinoplasty that was done a thousand years ago was the Indian type of operation, which was performed to cover up the defect, but there was no lining and no support Then they tried a covering with support but no lining, and finally Nelaton combined the three essentials The technic of Gilles, which grew out of his service in the war, certainly is the only method which makes a certain *rhinoplasty possible*

DR MILLARD F ARBUCKLE East St Louis, Ill In selecting the time for operation in cases with suppuration it is important to remember that considerable time is required for the scar tissue to become sterile

THE CATALASE CONTENT OF THE BLOOD IN DIFFERENT TYPES OF ANEMIA*

E B KRUMBHAAR, M D
AND
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PHILADELPHIA

In spite of the contradictory state of our knowledge of the catalase content of the blood under various clinical and experimental conditions, and the wide variations that have been found in different individuals of the same species,[1] we were led to make a comparative study of the catalase content of normal and anemic bloods by the statement of Van Thienen[2] that in pernicious anemia the catalase index of the blood was extraordinarily high Although Stehle's experiments demonstrate that the catalase content of the blood fluctuates under given conditions parallel with the hemoglobin content, nevertheless an index obtained by dividing the catalase content by the hemoglobin or red blood cell count would still be significant if it constantly showed changes in the same direction in this or that disease We, therefore have endeavored to control Van Thienen's observations by comparing such an index of the blood of pernicious anemia cases with that of other anemias and of nonanemic individuals A further control of the enumeration of the red blood cells in the actual sample from oxalated blood was also made in most cases As the index thus obtained was in the main proportional to that furnished by the clinical erythrocyte count and the variation never sufficient to affect the conclusion drawn, these figures have not been included in this report

The method of estimating the amount of catalase was exactly similar to that described by Stehle The samples of blood were necessarily collected at a distance from the laboratory, so that a delay up to an hour was unavoidable, but control tests proved that standing did not cause an appreciable change in the catalase content The slight increase that was sometimes found after standing several hours we considered to be probably due to the greater concentration of the sample The blood was obtained as far as possible at the same time of day, a given number of drops (twenty) from the ear or vein mixed with two drops of 10 per cent potassium oxalate, and well shaken before samples were taken We could detect no noteworthy differences in venous or capillary blood Two samples were taken of each blood and readings of the amount of oxygen liberated made after five, ten and fifteen minutes Of these readings, which were closely proportional, only the fifteen minute reading has been given, as coming nearest to the correct estimation This we have found to represent about 75 per cent of the total oxygen liberated, and minimizes errors introduced by changes in temperature, acidity, etc In a few cases in which an obvious fault in technic spoiled one of the samples, a single reading was taken In the others as the variation averaged less than 5 per cent, the average of the two readings is given

* From the John Herr Musser Department of Research Medicine, University of Pennsylvania School of Medicine

1 Burge W E and collaborators Am J Physiol **50** 165 (Oct) 1919 and numerous papers in the same journal since 1916 Stehle R L J Biol Chem **39** 403 (Sept) 1919 Winternitz M C Henry G R and McPhedran F The Determination of the Catalytic Activity of the Blood as a Clinical Diagnostic Method Arch Int Med **7** 624 (May) 1911

2 Van Thienen G J Nederlandsch Tijd chr v Geneesk **1** 2006 (June 7) 1919

After most of this work was done there appeared Bodansky's [3] demonstration that the volume of oxygen liberated depends on the hydrogen ion concentration of the peroxid, which may vary up to 35 per cent in different samples of the same make We were fortunate in having used only three different samples of peroxid, all of the same make, and made several estimations on each type of case with the same sample Our conclusions therefore, are not affected by the lack of control of this factor, although we have several times confirmed his observation that more oxygen is liberated from peroxid of p_H 7 than of lower hydrogen ion concentration The catalase index was obtained by dividing the number of cubic centimeters of oxygen liberated at the end of fifteen minutes by the red cell count expressed in millions Records of temperature and barometric pressure were kept, but the correction involved (which was always found to vary by less than 4 per cent) was so small, compared to the individual variations, that the original readings have been retained

RELATION OF CATALASE CONTENT OF BLOOD TO RED BLOOD CELL COUNT

Type	Cubic Centimeters of Oxygen Liberated by 0 1 C c of Blood in 15 Minutes	Red Blood Cell Count per Cubic Millimeter	Catalase Index
Pernicious Anemia			
Case 1	37 0	920 000	40
Case 2	80 0	2 320 000	34
Case 3	66 5	1 640 000	40
Case 4	31 5	1 020 000	31
Case 5	15 0	930 000	16
Case 6	45 5	1 910 000	24
Case 7	77 0	2 210 000	29
Case 8	29 0	1 560 000	19
Case 9	28 0	1 730 000	16
Average	45 3	1 483 000	28 6
Other Anemias			
Secondary	58 5	3 700 000	16
Secondary	140 0	2 830 000	53
Secondary	105 0	2 680 000	39
Secondary	77 0	3 490 000	22
Secondary	142 0	4 010 000	35
Secondary	111 0	3 660 000	30
Secondary	53 0	2,970 000	18
Acute hemolytic anemia	52 0	2 410 000	22
Congenital hemolytic jaundice	38 0	2 590 000	15
Congenital hemolytic jaundice after splenectomy	75 5	4 400 000	17
Banti's disease	155 0	3 800 000	41
Average	92 5	3 322 000	28
Nonanemic			
Aortitis	163 0	5 130 000	32
Premature menopause	179 0	5 160 000	36
Suspected syphilis	156 0	5 000 000	31
Trauma of lip	179 0	5 470 000	36
Headache	140 0	4 630 000	30
Normal	144 0	4 390 000	33
Normal	143 0	5 540 000	26
Normal	142 0	4 530 000	32
Normal	215 0	5 200 000	43
Average	164 1	5 013 000	32 7

Two items are at once apparent in the accompanying table first that the anemic blood liberated much less oxygen than the normal, and second, that the wide variations found by other workers were also present in our series Both the actual amount of oxygen liberated and the resulting indexes varied less in the nonanemic than in the anemic individuals, but the averages obtained from all three groups were surprisingly close

It is stated by Wells [4] that removal of various organs—among which is included the spleen—temporarily diminishes the catalase contents of the blood In a few tests on splenectomized monkeys we have found this to be the case but are inclined to attribute it to the transient anemia that follows splenectomy In a case of hemolytic jaundice on the other hand, when the blood picture improved greatly after splenectomy, the catalase content also increased so that there was very little resultant change in the catalase index In dogs, the catalase content of the blood is relatively low, but after they had been made plethoric by repeated transfusions, it was considerably increased

3 Bodansky M A Note on the Determination of Catalase in Blood J Biol Chem **40** 127 (Nov) 1919
4 Wells H G Chemical Pathology Ed 2 p 69

CONCLUSIONS

Under the conditions observed by us, the catalase content of the blood varies according to the concentration of red blood cells and this ratio is not materially affected by splenectomy or by the various types of anemia studied

GAUCHER'S DISEASE

REPORT OF A CASE

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PHILADELPHIA

According to Mandlebaum, up to 1916 there were nineteen instances of Gaucher's disease in the literature in which the diagnosis had been determined by histologic examination Since then, cases established on a similar basis have been reported by Evans, Reuben, Mandlebaum (two) and Carr and Moorhead This makes a total of twenty-four authentic cases,[1] to which the present report adds another

REPORT OF CASE

History.—J B aged 50, a Polish Jew a shoemaker, lived alone and had no relations or friends in this country, and very little could be learned of his previous history From the reports of the neighbors though somewhat "queer" he was apparently in good health and attended to his business regularly The day of his death he acted quite eccentrically, and without reason struck at one of his customers and chased her from the shop So violent were his actions that a policeman hurriedly called shot twice at the man each shot taking effect The patient was taken by the police patrol to the Hahnemann Hospital where an examination revealed the two bullet wounds One of these entered about the seventh rib on the right side causing a hematoma, but not penetrating farther the bullet being plainly palpable The other bullet entered in the left iliac region but no exit was found On admission the patient was conscious and able to tell his name and age and answer other questions He rapidly lapsed into unconsciousness however, and died in an hour and a half

Necropsy.—This was performed twenty-five hours after death by the coroner's physician, Dr W S Wadsworth, whose

1 These are as follows
Gaucher These de Paris 1882
Collier Tr Path Soc London **46** 148 1895
Picou and Raymond Bull Soc anat de Paris **70** 531 1895 Archiv de med exper et d anat path **8** 168 1896
Bovaird Am J M Sc **120** 377 1900
Brill Mandlebaum and Libman Proc New York Path Soc **4** 143 1904 Am J M Sc **129** 491 1905
Schlagenhaufer Verhandl d deut ch Gesellsch **10** 77 1907 Virchows Arch f path Anat **187** 125 1907
Von Herczel Wien klin Wchnschr **20** 123 1907
Marchand Munchen med Wchn chr **51** 1102 1907
Brill Mandlebaum and Libman Am Jour M Sc **137** 849 1909
De Jong and van Heukelom Beitr z path Anat u z allg Path **48** 598 1910
Mandlebaum J Exper Med **16** 797 1912
Wilson Surg Gynec & Obst **16** 240 1913
Downes Med Rec **83** 697 1913
Babes Aurel and Babes Compt rend Soc de Biol 1913, No 36 p 575
Sapegno Arch cience med **37** 323 1913
Stevenson Brit M J **2** 847 1913
Niemann Jahrb f Kinderh **79** 1 1914
Erdman and Moorhead Am J M Sc **147** 313 1914
Herrman Roth and Bernstein Arch Pediat **31** 340 1914
Evans Proc New York Path Soc **16** 114 1916
Reuben M S New York M J **107** 118 (Jan 19) 1918
Mandlebaum F S Am J M Sc **157** 366 (March) 1919 (two cases)
Carr J G and Moorhead L D Gaucher Type of Splenomegaly J A M A **72** 19 (Jan 4) 1919

notes state that the subject was of medium size and the body was in good condition, with fair muscular development and a moderate amount of fat The necropsy was performed primarily to ascertain the fatal effect of the bullets, and hence the notes on the organs are only casual The stomach and intestine were penetrated, and the lower edge of the spleen was cut by the bullet The liver exhibited what looked like a moderate chronic hepatitis The retroperitoneal glands were moderately enlarged The condition of the spleen was so peculiar that Dr Wadsworth kindly offered it to me for further gross and microscopic examination Death was unquestionably to be attributed to the bullet wound

The spleen was brought at once to the laboratory and found to weigh 825 gm and measure 23 by 12 7 by 5 cm The organ in general was quite soft, in some spots almost mushy, but scattered all through it were firm nodules more apparent to the palpating finger than to the eye The feel of these nodules might be compared to that of the numerous secondary tumors felt in malignant growth of the lung On section the firmer areas were not plainly discernible The general color of the sectioned spleen was that of a normal organ but close inspection revealed that the nodules were of a deeper brownish red than the surrounding parts The size of these firmer masses varied from 0 5 to 1 5 cm in diameter

Microscopic examination disclosed the characteristic picture of Gaucher's disease Rather marked thickening of the arteries and an abundance of pigment were also noted The nodular portions of the spleen correspond to those areas in which the dilated sinuses were prominent To eliminate any doubt as to the authenticity of the case sections were submitted to Dr F S Mandlebaum for an opinion His observations are as follows

"The sections of spleen from your case show the typical lesion of Gaucher's disease The dilated sinuses the arrangement of the large cells with the peculiar type of cytoplasm and small nuclei, often multiple, the pigment—all these are most characteristic features It might appear at a glance that those portions of the spleen in which the sinuses are not very prominent were devoid of large cells but with the high power the cells are readily seem among the pulp cells The follicles are rather well preserved but throughout the section the arteries show marked changes I assume from this that your case is that of an adult also because the pigment is quite prominent In young individuals the pigment as a rule is scant or absent in the spleen"

COMMENT

Clinically the meager knowledge of this case permits but few comments In the matter of age, this patient of 50 is the oldest case of Gaucher's on record Carr and Moorhead's [1] patient was 46 and Marchand's [1] the next in order, was 44 years of age As the disease is supposed to begin in infancy or early life and last many years, it might be expected that the older the patient, the greater would be the size of the spleen This was apparently realized in Brill, Mandlebaum and Libman's [1] case, the patient dying at 42, the disease lasting twenty-one years and the spleen weighing 8,100 gm Carr and Moorhead's [1] case also had a duration of thirty-seven years, and the spleen weighed 4,990 gm But Marchand's [1] patient, in whom the disease was supposed to have a duration of twenty years, had a spleen weighing only 2,720 gm And Schlagenhaufer's case had a record of thirty-eight years' duration, the patient dying at 43 with tuberculosis, and the spleen weighing 3,510 gm In the present case, the spleen, as far as can be ascertained, is the smallest of the Gaucher type occurring in adults, indicating that the disease began late in life or was extremely slow in development

The familial aspect of this disease has rightly been emphasized, but in none of the original reports available or in any of the summaries from the literature has there been found mention of racial predilection Yet, correctly or incorrectly, the perusal of case reports has given the collective impression that the disease is more common in Jews In the case herewith cited, the patient was a Jew This comment is therefore intended to be interrogative in character

The histology of Gaucher's disease has been described with great detail and exactness by Marchand,[1] Schlagenhaufer,[1] Risel,[2] Mandlebaum [3] and Mandlebaum and Downey [3] To the usual microscopic studies have lately been added observations on the microchemical reactions for lipoids Anitschkow [4] demonstrated large cells containing lipoids in animals experimentally fed on fats and lipoids, and in these cases the lesions resembled those of Gaucher's disease so closely that Aschoff [5] referred to the condition as "pseudo-Gaucher" Schultze,[6] Lutz [7] and Williams and Dresbach [8] also reported cases of diabetes with lipoidemia featured by large cells containing lipoids The resemblance to Gaucher's disease in these cases was noted In the two cases of Knox, Wahl and Schmeisser,[9] reported as examples of Gaucher's disease, the authors demonstrated a lipoid substance in the large cells of the first case Mandlebaum and Downey,[10] in a criticism of Knox, Wahl and Schmeisser's paper, point out the histologic identity of these cases with those of Anitschkow, Schultze and Lutz, and the further resemblance in lipoid content They conclude that the foregoing cases are not true examples of Gaucher's disease and believe that in genuine Gaucher's disease fat or lipoid bodies cannot be demonstrated in the large cells by microchemical means

In the present case sections of the formaldehyd-fixed spleen were stained with osmic acid, scarlet R, sudan III, Nile blue and by Ciaccio's method With osmic acid Nile blue and Ciaccio's method, results were negative Scarlet R and sudan III were used in the simple alcoholic solution, in Herxheimer's alkaline solution and also in his solution in alcohol and acetone The results with simple alcoholic solutions were negative, and those with the alkaline solutions were negative or unsatisfactory In employing scarlet R and sudan III dissolved in alcohol and acetone, the staining sections were exposed in open dishes contrary to the usual directions, and the fluid allowed to evaporate more or less In this way, it was noted that the large cells in the sinuses, as well as those in the pulp, took on a decided pink or red This color was never the deep red assumed by control fat sections, but in the spleen the color of the large cells contrasted distinctly with the pallor of the follicles and other cellular portions of the section They were easily the deepest stained parts of the specimen This was not due to precipitate for the cells assumed a diffuse pink or red color and not a granular or dotted appearance The significance of this reaction is not clear, but attention is called to Bullard's [11] remarks

Bell [12] believed that neutral fat is readily stained with simple alcoholic solutions of scharlach R but many faintly refractive liposomes which consist wholly or in part of lipoids are stained only by Herxheimer's method Later

2 Risel Beitr z path Anat u z allg Path **46** 241 1909
3 Mandlebaum and Downey Folia haematol 1916 **20**, Archiv 139
4 Anitschkow Deutsch med Wchnschr **39** 741 1913
5 Aschoff quoted by Mandlebaum and Downey (Footnote 10)
6 Schultze Verhandl d deutsch path Gesellsch **15** 47 1912
7 Lutz Beitr z path Anat u z allg Path **58** 273 1914
8 Williams J R and Dresbach M Am J M Sc **153** 65 (Jan) 1917
9 Knox J H M Jr Wahl H R and Schmeisser H C Bull Johns Hopkins Hosp **27** 1 (Jan) 1916
10 Mandlebaum F S and Downey H Bull Johns Hopkins Hosp **27** 109 (April) 1916
11 Bullard The Microscopical Demonstration of Fats in Tissue Sections J Med Res **27** 55 1912
12 Bell Anat Rec **4** 199 1910

Bell" states that there is no good evidence that Herxheimer's stain will show fats which are qualitatively different from those brought out by the simple alcoholic stains He, however, thinks that his faintly refractive liposomes contain some substance other than fat, possibly an albuminolipoid, and are usually left unstained by simple alcoholic solutions of scharlach R, while they may be stained with more or less intensity by Herxheimer's method

The Herxheimer method referred to by Bell is the alkaline alcoholic solution Mandlebaum[14] notes that while the peculiar substance in the cells of Gaucher's disease has never reacted to any microchemical method for lipoids, it is in all probability of complex protein nature in combination with lipoids

SUMMARY

The case of Gaucher's disease herewith reported is the twenty-fifth on record in which the diagnosis has been established by histologic examination The patient was 50 years of age, the oldest recorded Some positive staining reactions were obtained with concentrated Herxheimer's solutions of scarlet R and sudan III The significance of these results, however, is not clear

1327 Spruce Street

Clinical Notes, Suggestions, and New Instruments

ANESTHETIC FRAME

MYER N MOSKOVICH M D ST PAUL

The drop method of administering an anesthetic is superior to any other at present in use After the surgical point of anesthesia has been reached, only a small amount of the

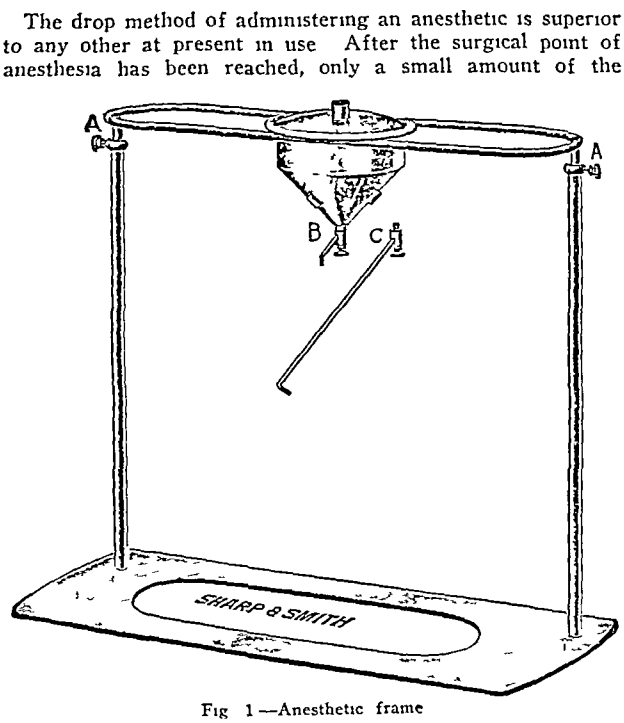

Fig 1—Anesthetic frame

anesthetic is required to keep the patient under and it is equal to that expired by the patient plus that given off by his tissues The variation in different individuals is within the range of difference between a slow and a fast continuous drop of the anesthetic It is difficult, however, to give such an anesthetic without interruption by the essential duties to watch the eyes, properly support the jaws take and record pulse and respirations, and do any number of other things arising during the course of its administration It was the desire to have an even and uninterrupted anesthetic given which prompted me to devise the apparatus here described

Figure 1 represents an anesthetic frame It is 15 inches in height when closed 18 inches in width, and weighs 5½ pounds The screws at *A* permit the height to be increased

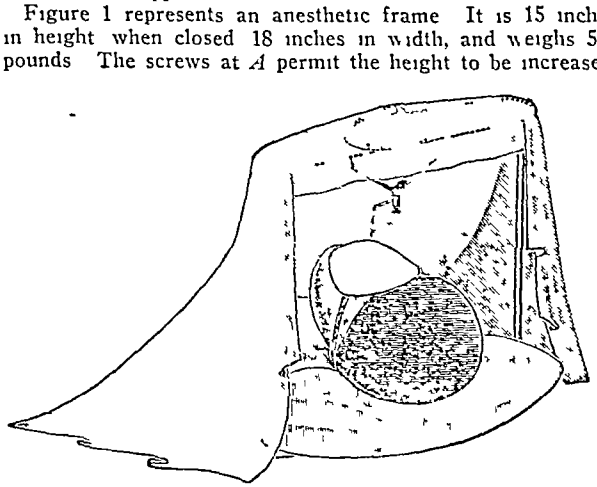

Fig 2—Apparatus in use

The can holds 12 ounces of the anesthetic, and may be rotated about or moved from side to side The short nozzle *B* is used in operations in which a sterile anesthetic is not required while the longer nozzle *C* is substituted in all operations about the head, neck and shoulders, thus administering the anesthetic at a point 8 inches from the patient's head, at which distance the operator works without being handicapped by the presence of the frame The small thumb screw at the lowermost part of each nozzle is used to adjust the flow from a slow to a fast drop or a continuous stream

Figure 2 crudely shows the apparatus in use and the manner in which the sheet from the patient's body is drawn over the frame to act as a means of separation between the operator's field and that of the anesthetist The patient's head rests on a pillow which fits between the rods of the frame and helps to keep the apparatus from sliding when the Trendelenburg position is used

The patient is first anesthetized in the usual manner When the third stage of anesthesia has been reached the frame is placed in position and the thumb screw regulated to permit the desired flow An Esmarch mask is used to receive the anesthetic and the gauze or flannel which envelops it is capable of diffusing the anesthetic as fast as it drops, a point which I proved to my own satisfaction and also to the satisfaction of those who have watched the frame in use

ADVANTAGES

1 The apparatus aids in the administration of a uniform drop method anesthetic without interruption

2 It permits the use of one or both hands when required

3 It acts as a shield in separating the operator from the anesthetist

4 It may be used to replace the so called sterile anesthetic, which in reality does not exist

5 Ether or chloroform may be used

6 The frame is of convenient size simple in construction uncomplicated in its manipulation, attractive in appearance, and inexpensive

641 Grand Avenue

13 Bell Internat Moratschr f Anat u Physiol **28** 297 1911
14 Mandlebaum F S Am J M Sc **157** 366 (March) 1919

Sodium Fluorid as Insecticide—The best insecticide against the roaches is sodium fluorid powder mixed half and half with flour or starch and sprinkled lightly about their haunts If the powder is used pure it is not very efficacious as the roaches will not always eat it particularly if it is heavily sprinkled as its poisonous effect on the insect is produced by its being ingested—*U S Nav M Bull* January 1920

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JULY 10, 1920

LIMITATIONS OF KNOWLEDGE IN THE MANAGEMENT OF NEPHRITIS

It is a wholesome experience in medicine from time to time to pause long enough to take stock of our knowledge in various departments of practice, and to ascertain whether we are walking in the light of sound information or merely groping aimlessly in the darkness of ignorance Now and then some thoughtful clinician, who is unwilling to apply drugs regarding the action of which he has only traditional or conjectural evidence to guide him, is met with the charge of therapeutic nihilism In this day and generation, however, it is high time to understand that skepticism is not necessarily identical with either ignorance or pessimism Scientific education has taught medical men, like others, to demand the truth above all else Guesswork can never be a real panacea For this reason we welcome the frankly critical review by Christian[1] which was recently published in THE JOURNAL on the subject of treatment in chronic nephritis

The subject is one of such widespread interest and significance in the daily life of every physician that the gaps in our knowledge deserve to be made clear and prominent Without essaying to review the details of Christian's contentions, we may point out in his words that, except for the removal of recognized foci of infection and as prompt and efficient treatment as is possible of all acute infections, we at present can do virtually nothing for the prevention of nephritis Preventive treatment in a practical sense is almost nil for chronic nephritis, and will remain so until we learn more of the etiology and particularly of the factors that influence the progressive development of renal lesions The use of new words, such as nephropathy or nephrosis, does not advance our knowledge beyond addition to the vocabulary

It is currently believed that in chronic nephritis the kidney is more or less incompetent and must therefore be spared from "overwork" Since water, salts and nitrogenous catabolites represent the compounds which the kidneys help to eliminate, effort is often made to diminish the occasion for getting rid of these products The intake of these, or of their precursors in the case of nitrogenous waste products, is restricted Although it is realized that undue reduction in the water output may damage the renal cells owing to the excessive concentration of the resulting urine, few efforts have been made to ascertain what constitutes an optimal or desirable water intake in nephritis Practice today proceeds in individual cases on a basis of hypothesis rather than fact, yet, as Christian has remarked, until appropriate studies have been made, much of the value of a prescribed water intake in influencing the course of nephritis must remain guesswork The "flushing out" of the "system" or the kidneys with water, whatever this may mean, represents the converse unfounded therapeutic project that one still hears spoken of at the bedside

"Sparing" the kidneys by restricting the protein intake likewise is not without possibilities of detriment if it is continued to an extreme degree or over long periods The advantages of reducing kidney function by decreasing the excretory work to be done has been heralded by the advocates of the low protein diet There is, however, no proof that a kidney necessarily suffers by the work to which it is adapted any more than does a muscle Functional performance tends in many instances to improve rather than deteriorate the structures concerned By use a muscle grows stronger, more efficient, and less easily fatigued Inaction is detrimental What is "physiologic rest" for the kidney? And what will be the effect, on the organism as a whole, of prolonged deprivation of indispensable protein? Janney[2] has sounded a possible warning by asserting that nephritics may even attain an unfavorable condition because of low protein intake for a long period Those patients are frequently rather weak and obese because the average man will make up promptly in fats and carbohydrates for what he is prevented from taking in the way of protein food The occurrence of obesity must be avoided in nephritis The obese nephritic is usually weak and neurasthenic

To the foregoing features of uncertainty may be added the limitations of knowledge with respect to nephritic edema and its management It is not always easy to dissociate the renal from the extrarenal factors The once valued diuretic drugs are known to be actually harmful in some cases in that they only add to the kidney irritation without facilitating elimination Debilitating sweats and catharsis help little at best And when we approach the subject of the hypothetic toxins, the vagueness of the literature is a monument to the substitution of fancy for fact We need more facts

1 Christian H A Deficiencies in Our Method for the Treatment of Chronic Nephritis J A M A 74 1615 (June 12) 1920

2 Janney N W in discussion on article by Christian J A M A 74 1618 (June 12) 1920

VITAL STAINING

The current scientific literature includes numerous references to phenomena that are designated as "vital staining"—an expression which we believe to have been promoted, if not actually introduced by Ehrlich In its original implication it was supposed to apply to certain living cells that were distinguishable from others by the capacity of being stained with special dyes introduced into the body Methylene blue was among the first of such compounds to be studied Numerous other "vital stains" have since been investigated It was Ehrlich's belief that the localization of these dyes in definite structures is due to chemical combinations within the tissues The capacity of a cell to undergo vital staining was thus interpreted as a reaction between special groups in the protoplasm and the selected dye The hypothesis was formulated to fit Ehrlich's "side chain theory," which has played a prominent part in the development of the science of immunology

A review of the history of vital staining shows that the phenomenon has played a part in the explanations of the permeability of cells in general Certain uninjured cells are readily penetrated and "stained" by such dyes as neutral red, methylene blue, toluidin blue, thionin and saffranin Other dyes like nigrosin and anilin blue tested under comparable conditions do not penetrate the cells Wells [1] has pointed out that Overton tested the solubility of dyes which are not vital stains and found them insoluble in oils, fats and fatty acids, but the dyes staining living cells were readily soluble in lecithin, cholesterol, "protagon" and cerebrin, the so-called cell lipoids Furthermore, if crumbs of lecithin, "protagon" or cerebrin were placed in very dilute watery solutions of these dyes, they were found to absorb from the water the vital stains, but not the others, which indicates that stains that penetrate living cells are more soluble in lipoids than they are in water

The theory of the essential lipoid solubility of all dyes that penetrate cells must be abandoned because of numerous contradictions with experimental facts As the result of an elaborate study of vital stains and staining, Schulemann [2] has found it necessary to discard the other previously mentioned hypothesis also According to him, the occurrence or nonoccurrence of vital staining with any dyes depends essentially on the physicochemical properties of the latter Those dyes that are not readily diffusible penetrate cells with slowness, and when once they find their way into these structures they disappear from them only slowly Readily diffusible compounds, on the other hand, easily stain cells, and the dye disappears again with readiness Vital staining thus becomes in the main a question of penetration by diffusion—not a problem of specific chemical affinity with some component of the protoplasm The behavior of dyes in relation to cells is a result of the physicochemical properties of the substance investigated, rather than of their chemical structure The deposition of dyes in granular form within tissues seems to depend on physicochemical conditions that induce flocculation

The distribution and deposition of dyes as they are observed in so-called vital staining is of scientific interest because these phenomena, which can be followed by the colors that are involved, apparently duplicate the movements of many other noncolored substances, including products of metabolism, within the tissues If it is true, as Schulemann asserts, that the vital stainings are the exhibitions of the expected distribution of chemical substances having appropriate diffusion and solubility characters, it may be assumed that nonvisible compounds like the amino-acids, carbohydrates and other normally occurring metabolic intermediary products of comparable diffusibility, etc, can find their way into the same structures by the same pathways from the blood This is likewise true of the movements of drugs in the body Suitable dyes may be expected to teach the paths, places and limits of penetration which may ultimately help to disclose where and how important biologic reactions take place Vital staining has already been employed to distinguish normal from abnormal cells by their unlike permeability to the products selected to discover them Perhaps the appropriate pathways of drugs will similarly be discovered

1 Wells H G Chemical Pathology Philadelphia W B Saunders Company 1918 p 50

2 Schulemann W Die vitale Farbung mit sauren Farbstoffen in ihrer Bedeutung fur Anatomie Physiologie Pathologie und Pharmakologie Biochem Ztschr 80 1 (March) 1917

INTERRELATIONS OF ATROPHY AND HYPERTROPHY IN THE LIVER

Under abnormal conditions, portions of the liver may be the seat of either atrophy or hypertrophy An increase in the mass of one or more lobes has been observed to follow local disturbances that interfere with the portal supply to other parts of the same organ This increment in hepatic parenchyma may be regarded as a compensatory hypertrophy, analogous to the overgrowth which other parenchymatous structures undergo when added burdens of functioning are thrown on them The possibility of an atrophy in one lobe dependent essentially on a simultaneously developing hypertrophy elsewhere seems, on the other hand not to have been appreciated in the study of the pathology of the liver The prevailing view has been that severe atrophic liver changes do not occur after interference with branches of the portal circulation in man or the laboratory animals unless the blood pressure is abnormally low in the hepatic artery or the vena cava as the result of a disturbed circulation When atrophy does occur, it has been thought to be due to some more severe degeneration of tissue

Rous and Larimore[1] have recently recorded the occurrence of atrophy in liver tissue conditional on compensatory changes in other parts of the organ The occlusion of portal branches to a part of the liver of the rabbit leads to a progressive and ultimately complete atrophy of the parenchyma in the region deprived of portal blood, and to hypertrophy of the rest of the hepatic tissue which receives such blood in excess Three fourths of the liver may thus be reduced to a fibrous tag within two months, while the remaining fourth attains the bulk of the entire original organ The atrophy is simple, unaccompanied by obvious degenerative changes or by any connective tissue replacement More important, it is conditional in nature, failing to progress when the bile duct from the proliferating tissue is ligated and its hypertrophy checked in this way

There are numerous indications, as Rous and Larimore point out, that in man also an atrophy conditional on hypertrophy elsewhere may occur after interference with parts of the portal circulation They suggest that the advanced local atrophy sometimes occurring in livers containing an echinococcus cyst, a gumma, slow growing tumor, or other limited process may well be the result of pressure on portal radicles In such instances there is present elsewhere in the organ an abundance of parenchyma capable of compensatory proliferation Likewise, it is suggested that local portal obstruction may be a prime cause for the extreme atrophy and hypertrophy sometimes seen in syphilitic livers, whereby great hepatic distortion results

How is a destruction of liver tissue dependent on compensatory hypertrophy to be explained? Various possibilities have suggested themselves When the portal blood stream is obstructed, the liver tissue is dependent on arterial blood alone It is conceivable that the latter may be unsuitable for hepatic cells, but such unfitness would apply even when other liver cells were not undergoing hypertrophy on which the atrophy is evidently conditioned Possibly the lack of the particular digestion products carried by the portal stream alters the functional state of the hampered cells Perhaps, indeed, a special "food" is needed for the liver tissue which it cannot secure from the general circulation when once the unimpeded hepatic residue has hypertrophied to the point of being able to utilize all that is brought to it by the remaining portal stream These are, indeed, mere physiologic speculations If a "functional atrophy" of the liver truly exists, however, we must agree with Rous and Larimore that its completeness indicates that the liver has no essential activity, at least none on which its maintenance depends, which is not intimately associated with substances derived from the organs drained by the portal system It is a significant experimental observation that the bile secreted from a liver mass far advanced in atrophy and competing with a large bulk of parenchyma receiving the entire portal stream is almost colorless and devoid of characteristic bile salts Glycogen, on the other hand may be present in the atrophic cells in approximately the same amount and distribution as in the hypertrophic liver tissue of the same animal "Conditional atrophy" may not only explain such chemical anomalies, Rous and Larimore venture to believe that it may perhaps also be responsible for alterations in the shape of the normal liver that have been indefinitely attributed heretofore to pressure from the surrounding organs

1 Rous Peyton and Larimore Louise D Relation of the Portal Blood to Liver Maintenance a Demonstration of Liver Atrophy Conditional on Compensation J Exper Med 31 609 (May) 1920

THE MEASURE OF PHYSICAL FITNESS

If the attainment of what is sometimes termed "athletic condition" is a factor in physical fitness and human efficiency, it becomes important to learn the criteria Relative freedom from fatigue, effective muscular training, good health and similar expressions indicative of preparedness for bodily activity offer at best a vague implication regarding the physiologic basis for competent performance by the individual What is involved in physical fitness? How can it be attained and how is it affected by exercise or training? If these questions can be analyzed in a purely objective way free from the personal or individual bias of the examiner or the subject concerned, a distinct step in advance toward a real physiology of exercise will have been taken

A recent writer[1] has concluded that the chief elements in athletic condition are a strong heart muscle, a highly efficient coronary circulation, and good peripheral vasomotor control He hazards the further guess that there may be even deeper factors, such as a vigorous metabolism involving the ability to generate energy rapidly without undue accumulation of harmful end-products Obviously, the possession of these faculties will enhance the ability to meet new muscular tasks with success and to adjust promptly to severe muscular effort There have been numerous suggestions in the past for estimating these features of fitness For example, it has been noted that the heart rate serves as an indication of condition, since it is relatively low in the active, well trained person, and that it is increased less on exertion in the athletic person and returns more promptly to its normal rate than it does in the case of the sedentary, inactive individual A slow horizontal and a slow vertical postural pulse, with a small difference between the two, are also usually now regarded as signs of "excellent health" Changes in blood pressure have also been referred to as indicative of the same features[2]

1 Manual of Medical Research Laboratory War Department Air Service Division of Military Aeronautics Washington D C 1918 p 85

2 Crampton Proc Soc Exper Biol & Med 12 119 1915 Sewall Am J M Sc 158 786 1919

The question of physical condition has been especially important in the disposal of men in the service of the army Reviewing the difficulties that beset the responsible officer, Schneider[3] has lately pointed out in THE JOURNAL that so far as the pulse rate criteria are concerned, in forming a judgment as to the physical condition of a man it is best to consider together the postural rate, the increase on standing and after exercise, and the time required for the rate to return to the normal after exercise Those who are concerned in physical training as an aid to healthful living will be interested in Schneider's account of the scoring scheme introduced in the medical inspection of the air service to take cognizance of six factors that represent cardiovascular changes or conditions In a mathematical way it recognizes, with a minimum of "personal bias," to quote Schneider, that fatigue or derangement may be evidenced in the high heart rate during reclining, during standing, in the number of beats the heart rate increases when the standing and reclining postures are compared, in the accleration of the pulse rate after exercise in the time taken by the pulse to return to normal, and, lastly, in the rise or fall in the systolic blood pressure on standing A low score not only helps to eliminate the less fit but also acts as a stimulus to the person who needs to exercise in such a way that "his heart will have to work harder, the coronary vessels deliver a full volume of blood, the vasomotors be practiced in their work, the respiration deepened, and metabolism kept going at an increased rate"[1] Apparently we now have a more satisfactory test of cardiovascular fitness

Current Comment

GENERAL WILLIAM CRAWFORD GORGAS

A man sometimes becomes a tradition or a symbol Before his death, Gen William Crawford Gorgas had become a symbol of hygiene an idol to whom all the nations of the world appealed when threatened by deadly plague or perilous infection The tradition, in this case, was based on a record of successful accomplishments yellow fever driven from Havana, Panama —the "White Man's Grave"—made one of the most healthful places in the world, investigations on pneumonia in Africa, and an American army under his protection, with one of the lowest mortality records heretofore achieved It is not necessary to repeat here how these sanitary triumphs were developed Much has been written on the subject, and no doubt the future will produce competent histories and appreciations, but it is interesting to consider the record in relation to Gorgas, the man His personality was not that of the indomitable leader whose word is law and who brooks no interference He was a man of soft word and kind thought, seeking counsel and gathering around himself associates whom he trusted and who put their trust in him He made many friends through his ever gracious manner He greeted all with a smile of welcome, ever ready to hear both sides of any case which might come before him in the many positions of leadership which he held He commanded the love and respect of all with whom he came in contact It was this that made it possible for Dr Gorgas to accomplish the great works that have made his name a household word in every civilized land "In the conquest of science over disease" said Welch, on one of the many occasions in which the medical profession honored General Gorgas, "in the saving of untold thousands of human lives and human treasure, in the protection of our shores from the once ever-threatening scourge of yellow fever, in the reclamation to civilization of tropical lands—in results such as these are to be found the monuments of our laureate, his victories of peace"

BEHAVIOR OF UNCOOKED STARCH IN THE DIGESTIVE TRACT

When uncooked starch is subjected to the action of human saliva in the biochemical laboratory, it is converted slowly and incompletely at best into soluble products The student has been taught that the starch grains must be ruptured and their contents "liberated" to insure good amylolytic digestion The membranes enveloping the starch grains have been regarded as relatively impervious to digestive juices and the enzymes which they contain, hence the importance of cooking starch to render it readily digestible It has been reported, in harmony with this point of view, that no starch appears in the feces after a meal of well cooked wheat or rye bread, rice or potatoes, or even legumes prepared in the form of puree Legumes not in this form—for example, string beans eaten as salad—may resist the action of the digestive juices so that the starch contents of the cell are untouched, and the vegetable cells appear in the feces These facts explain the appearance of bread in the feces if the bread is badly baked, or if such a "heavy" bread as pumpernickel is eaten The imperfectly heated bread contains starch granules whose coverings are impermeable to the digestive juices, as are also many of those in the unbolted rye of pumpernickel[1] Despite these traditional teachings, it appears from recent investigations conducted in the Office of Home Economics of the U S Department of Agriculture[2] that current statements categorically claiming that starch in the "raw" state is to man an almost indigestible substance must be revised The proof of the pudding is the eating Langworthy and Deuel[2] have fed to men fairly large quantities of raw starches in the form of frozen puddings resembling ice cream in taste and texture The starch granules were neither swollen nor broken, yet ingested quantities exceeding 200 gm a day disappeared from the gastro-intestinal tract Raw corn and wheat starches were found to be

3 Schneider E C A Cardiovascular Rating as a Measure of Physical Fatigue and Efficiency J A M A 74 1507 (May 29) 1920

1 Lusk Graham The Elements of the Science of Nutrition Philadelphia W B Saunders Company 1917 p 52

2 Langworthy C F and Deuel H J Digestibility of Raw Corn Potato and Wheat Starche J Biol Chem 42 27 (May) 1920

completely assimilated, and no trace of them could be found in the feces. Experiments on raw potato starch gave values for its digestibility varying from 62.3 to 95.2 per cent., the average was 78 per cent. The digestibility of the other constituents of the diet was not affected to any great extent by the large amounts of raw starch ingested. Why the ingestion of potato starch caused disagreeable physiologic disturbances not noted in the other experiments with raw corn and wheat starches remains to be ascertained. Whatever the explanation of this undoubted capacity for the utilization of at least some uncooked starches in the digestive tract of man may be, the newly demonstrated facts place the potency of the alimentary apparatus of man in a new and favorable light.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION PUBLIC HEALTH ETC.)

CONNECTICUT

Million for Medical School—A gift of $1,000,000 to Yale University from the general education fund has been announced. The fund is to be used for the development of the New Haven General Hospital through the medical school of the university.

Alumni Meeting—At the forty-first annual meeting of the Yale Medical School Alumni Association, held June 21 in New Haven, under the presidency of Dr. Alfred G. Nadler (96), New Haven, the principal address was delivered by Dr. Milton C. Winternitz, and the following officers were elected: president, Dr. Jeremiah J. Cohane (98), New Haven; vice presidents, Drs. Frank L. Phillips (06), New Haven, Gould S. Higgins (01), North Haven, Samuel C. Harvey (11), New Haven, David P. Smith (12), Meriden, and Ralph A. McDonnell (20), New Haven; and secretary-treasurer, Dr. Simon B. Kleiner (15), New Haven.

Personal—Dr. Milton C. Winternitz, professor of pathology in Yale University Medical School, has been elected dean of the school, succeeding Dr. George Blumer, whose resignation takes effect at the close of the college year.—Dr. Alexander L. Prince, assistant professor of physiology in Yale University Medical School, has resigned to accept a position in the industrial research department of the Aetna Life Insurance Company.—Mr. Friend Lee Mickle has resigned as bacteriologist of the bureau of laboratories of the Connecticut State Department of Health to accept an appointment as director of laboratories of the bureau of health, Atlantic City, N. J.

ILLINOIS

Chiropractor Fined—J. H. Cairns, 6241 Kimbark Avenue, Chicago, was arrested by the department of registration and education for practicing as a chiropractor without a state license. He pleaded guilty to the charge on June 28, and was fined $50 and costs.

Illegal Practitioner Fined—Walter A. Huffman, Chicago, was arrested by the department of registration and education for practicing medicine without a license and on June 20 was fined $25 and costs. In addition to the money fine he was committed to the county jail for fifteen days.

Physician's License Revoked—At a meeting of the Department of Registration and Education of Illinois, June 10, the license of Dr. John Paul Furno (also known as Dr. J. Paul Furnel) of Chicago was formally revoked on account of unprofessional and dishonorable conduct.

Hospital to Be Closed—As the result of a visit of Surg.-Gen. Merritte W. Ireland, U. S. Army, to U. S. General Hospital No. 28, Fort Sheridan, it is announced that the institution will probably be closed October 1. At the time of General Ireland's visit there were less than 800 patients in the hospital.

Births Not Registered—According to the computation of the health commissioner of Chicago, there were 98,412 births in Chicago during the last eighteen months, but of these only 72,076 were reported. He has therefore formed a board composed of Dr. Martin O. Heckard, chief of the bureau of vital statistics, Dr. H. O. Jones, assistant chief of the bureau of child hygiene, and Assistant Corporation Counsel Edgar A. Jonas to hear the explanations of parents and physicians summoned before them for failure to report births.

Drives for Hospitals—The Federated Orthodox Jewish Charities of Chicago won their campaign for $100,000, June 24, when $65,000 in cash and $35,000 in pledges were turned in by workers.—Plans for a city wide campaign for a million dollars for buildings and maintenance of the consolidated Polyclinic and Henrotin hospitals were discussed at a meeting of the board of directors, June 23. The campaign will be inaugurated early in the fall.—More than $6,000 was raised in the tag day for the new Auburn Park Hospital fund.—A drive for $500,000 to rebuild the Edward Sanatorium, Naperville, has been started. This institution is a branch of the Chicago Tuberculosis Institute.

INDIANA

Typhoid at Shultztown—Cass County has requested the state board of health to send a health officer to Logansport to take charge of the typhoid situation in Shultztown, a suburb of Logansport.

Nurses Elect New Head—Margaret P. Church of Fort Wayne has been elected president of the state board of registration and examination for nurses. Edna Humphrey of Crawfordsville is the secretary of the board.

Personal—Dr. Cloud M. Jackson, Elizabethtown, has been appointed coroner of Bartholomew County, succeeding Dr. George F. Cline.—Drs. Joel D. Sturdevant and Samuel W. Hooke have been appointed members of the board of health of Muncie who has been seriously ill following an operation for abdominal tumor, is reported to be improving.—Dr. John W. Cook, Pendleton, was stricken with cerebral hemorrhage June 21.—Dr. John H. Plew, Martinsville, suffered a cerebral hemorrhage June 9.

Found Guilty—Dr. Frederick E. Crum, Indianapolis, and Frank J. Peacock charged with having violated the Reed amendment by transporting 194 quarts of whisky from Cincinnati into Indiana May 6, 1919, are said to have pleaded guilty and to have been fined $10 and costs each.—Frank Clark and Lottie Clark accused of operating a soft drink establishment in Terre Haute which was the center of wholesale trading in narcotics were sentenced June 30. Clark was sentenced to four years' imprisonment in the federal prison, Atlanta, and to pay a fine of $1,000 and his wife was sentenced to imprisonment for two years in the Indiana Woman's Prison.

KANSAS

Personal—Dr. John T. Scott, St. John, was elected president of the Seventh District Medical Association at its meeting in Hutchinson, June 17.—Dr. Milton O. Nyberg has succeeded Dr. William T. Doherty as city physician of Wichita.

State Board Items—Drs. George R. Dean, McPherson, and Henry A. Dykes, Lebanon, have been reappointed members of the state board of medical examiners.—At the annual meeting of the Kansas State Board of Medical Examiners, held in Kansas City, June 15, Dr. Charles W. Jones, Olathe, was elected president, succeeding Dr. George R. Dean, McPherson, and Dr. Henry A. Dykes, Lebanon, who has served as secretary for twelve years, was reelected.

LOUISIANA

Buy Parish Medical Society Building—The local lodge of Elks has purchased the Orleans Parish Medical Society Building for $50,000. The research library of the society will be moved to the Hutchinson part of Tulane and later on the society expects to purchase a new site for a building.

Personal—Dr. Clarence Pierson, for fifteen years superintendent of the East Louisiana Hospital for the Insane, Jackson, has resigned.—Dr. J. George Dempsey, New Orleans, head of the antituberculosis bureau of the city board of health, has resigned to become statistician of the state board of health.

Hospital Items—The staff of the Hotel Dieu, New Orleans, effected a permanent organization, June 15, and elected Dr Marion S Souchon, president, Dr Homer J Dupuy, Jr, vice president, Dr Henry W E Walther, secretary, and Dr Lucien A Fortier, recorder——Belvedere Private Sanatorium, New Orleans, has been taken over by the United States government and will be utilized for the care of nervous and mental cases Clarence H Waring P A Surg, U S Public Health Service will have general charge of the institution and Dr R M Connelly will be resident neurologist

MAINE

Larger Quarters for Health Department—The steady growth of the Maine Department of Health in the number of its workers and its lines of activity has necessitated an increase in the size of its headquarters in Augusta The present health building on the State Hospital grounds is to be increased by the extension of the south wing and the new offices will be ready for occupancy in September

Health Department Appointments—William H Sawyer, Jr, assistant professor of biology in Bates College, Lewiston, has been appointed assistant in the diagnostic laboratories during July, August and early September E. S Lawrence, Gardiner, has been made summer assistant in the water laboratory in the division of sanitary engineering and William Lawrence has been appointed hotel inspector for the summer season

Public Health Association Organized—The former state antituberculosis association has been reorganized as the Maine Public Health Association with a board of eighty-five directors and the following officers president, Dr Elmer D Merrill, Foxcroft, vice presidents E M Hamlin Milo Dr Sylvester J Beach Augusta and Henry Richards, Gardiner, secretary, Mrs Howard R Ives, Portland, and treasurer, Ralph Whittier, Bangor

MARYLAND

Pleads Guilty—Dr Chauncey T Scudder Arlington, arrested some time ago on a charge of violation of the Harrison Narcotic Law, is said to have pleaded guilty in the district court, June 17, of administering drugs in violation of the law His sentence has been suspended until October

Personal—Dr Dwight H Mohr, Baltimore, has been appointed chief police surgeon of Baltimore succeeding Dr T H Athey——Asst Surg-Gen Henry R Carter, U S Public Health Service superintendent of the United States Marine Hospital, Baltimore sailed from New York June 19 for Pieta, Peru, where he will engage in sanitary work for the Peruvian government with special reference to yellow fever and bubonic plague——Dr Carl M Van Poole, Mount Airy, has been appointed local surgeon of the Baltimore and Ohio system

MASSACHUSETTS

Personal—Dr James A McKeon, Lynn who was committed to the State Hospital, Danvers for observation, is said to have escaped from the institution

MICHIGAN

Branch Laboratory Established—Plans have been formulated by the state health department and the officials of Port Huron whereby a branch laboratory of the state health department will be established in that city

Summer Health Camp—The Detroit Department of Health has decided to establish a summer health camp with accommodations for 100 children and the city council has appropriated $10 000 for this purpose The camp will be in charge of health department officials

Smallpox Subsiding — The smallpox outbreak, which assumed rather alarming proportions in Detroit last month, has decreased greatly and there are now only about seventy cases in the city The disease was confined almost entirely to negroes and to certain regions in four wards of the city

Hospital Association Meeting—At the annual meeting of the Michigan Hospital Association held in Detroit last month, Dr Christopher G Parnell, Ann Arbor, superintendent of the University Hospital, was elected president, Dr Stewart Hamilton superintendent of the Delray Industrial Hospital Miss Grace McElderry of Hackley Hospital Muskegon and Miss Anna M Schill of Hurley Hospital Flint, were made vice presidents, Dr Durand W Springer University Homeopathic Hospital, Ann Arbor was elected secretary, and Dr Herman Ostrander, Kalamazoo, treasurer

NEW JERSEY

New State Officers—At the annual meeting of the Medical Society of New Jersey held at Spring Lake, June 16-19, under the presidency of Dr Gordon K Dickinson Jersey City the following officers were elected president Dr Philander A Harris, Paterson, vice presidents Drs Henry B Costill Trenton James Hunter, Jr Westville and Wells P Eagleton Newark, corresponding secretary Dr Harry A Stout, Wenonah (reelected), recording secretary, Dr William J Chandler South Orange (reelected), treasurer Dr Archibald Mercer Newark. The next annual meeting will be held at Atlantic City

NEW MEXICO

New State Board Member—Dr William R Lovelace Albuquerque, has been appointed member of the state board of medical examiners to fill the unexpired term of Dr Charles B Kohlhousen deceased

County Full-Time Health Officer—San Miguel County has authorized a levy for the purpose of maintaining a full-time county health officer The Rockefeller Foundation will pay $3 000 toward the salary and maintenance of the office

Schools and Health Crusade—Ten public schools in New Mexico were winners in the various divisions of the health crusade These include the schools at June La Madera, Sapello, three at Clovis, Ventanas, Carlsbad, Hondo and Socorro

Public Health Association Still Active—Some misunderstanding has been caused on account of the recent closing of the offices of the National Tuberculosis Association in Albuquerque The office of the public health association is still open and will continue under the direction of Mr Clinton P Anderson

NEW YORK

Mullan Bill Signed—Governor Smith has signed the Mullan bill to amend the public health law in relation to the practice of nursing, by including the terms of 'trained certified and graduate' nurse along with that of 'registered nurse"

Detectives Discover Drug Cache—Police of the Italian squad discovered $75 000 worth of cocain in the home of Louis Mauro 160 Carroll Street Brooklyn and $150 000 worth of cocain and other habit-forming drugs in the home of Giuseppe Gangarossa 170 Carroll Street These men confessed that the drugs were smuggled to them from Italy though the last consignment came from Germany They state that their chief market was along the water front of Brooklyn

Public Health Graduates Organize—Graduates of the 1919 and 1920 graduate course in infectious diseases and public health which has been conducted under the joint auspices of the Albany Medical College and the state department of health by Dr Charles C Duryee Schenectady, medical director, met at Albany Medical College June 24 and organized the Eastern New York Post-Graduate Public Health Association and elected the following officers honorary president Dr Charles C Duryee state department of health, president Dr Melville D Dickinson Troy, vice president Dr William C Treder Scotia and secretary-treasurer Dr William G Keens Albany It was decided to hold two meetings annually one of these to be in conjunction with the annual state conference of health officers After the meeting a dinner was held, and the certificates were presented to the class of 1920

New York City

Golden Wedding—Dr and Mrs Lewis Stephen Pilcher, Brooklyn celebrated their golden wedding anniversary June 21 at their country home The Eagle's Nest, Lake Hopatcong N J

Drug Smugglers Arrested—Revenue inspectors of the port of New York recently arrested a former detective as he landed from an Italian steamer In a false bottom of his trunk were found 840 packages of cocain According to the customs officials this country, during the past year has been supplied almost exclusively with narcotics for the illicit trade from Italian ports

NORTH CAROLINA

Personal—Dr Charles E Lowe Wilmington has resigned as health officer of New Hanover County and has been succeeded by Dr R A. Herring at present stationed at Millledgeville, Ga

Antituberculosis Clinics—From June 14 to July 3, a series of antituberculosis clinics was held in Gaston County under the direction of the state board of health and in immediate charge of Dr Joseph L Spruill of the state sanatorium, Columbia

Betterment Fund for Hospital—Physicians of Raleigh, headed by a local committee composed of Drs Hubert A Royster, John B Wright, James W McGee and Hubert B Heywood, have recently secured more than $100,000 for the betterment fund of the Rex Hospital

Antityphoid Campaign—The authorities of Gaston County with the cooperation of the North Carolina State Board of Health offered the people of the county free inoculation against typhoid fever Work will be under the charge of Dr Charles S Mangum Chapel Hill, of the medical faculty of the University of North Carolina, and Dr William B Hunter Wilmington, superintendent of public welfare, and will continue until July 24

Education Campaign in Health and Sanitation—Mr W A McGirt general manager of the North Carolina Landowners Association announces that an intensive educational campaign in hygiene and sanitation will be conducted in eastern North Carolina as a part of the activities of the association The campaign will be in the form of free illustrated lectures to be given by Dr Charles E Low, formerly superintendent of health of Wilmington and New Hanover County The program includes the full-time service of Dr Low as sanitary expert who will deliver illustrated health lectures on malaria, typhoid fever hookworm and the relation of insects to the transmission of these diseases, soil and water pollution, necessity of privy sanitation undernourishment, faulty diet and the need of a larger milk supply

PENNSYLVANIA

Personal—P W Whiting, in charge of biology at Franklin and Marshall College, Lancaster has resigned to accept a position at St Stephens' College, Annandale-on-Hudson, N Y——Dr Robert M Hursh has been appointed assistant in the Harrisburg genito-urinary clinic——Drs John Gilbert Frank V McConkey, Gibson Smith Herman H Farkas and Alfred A Long have been appointed assistants to the reorganized tuberculosis clinic at York——Dr Charles C Cooner, Kulpmont has been appointed assistant at the Mt Carmel Tuberculosis Clinic

Philadelphia

Personal—Dr William W Keen, emeritus professor of surgery at Jefferson Medical College was awarded the degree of Doctor of Science by Harvard University at the recent commencement exercises——Dr Alonzo E Taylor, professor of physiologic chemistry at the University of Pennsylvania was given the honorary degree of Doctor of Laws by the University of Wisconsin Madison——Dr Hugh M Miller Philadelphia has been appointed chief of the genito-urinary clinic of the Phipps Institute——Dr Leo J Rostow dispensary physician to the Babies Hospital Philadelphia was presented with a silver cup and fifty volumes of books by the board of managers at the annual meeting, June 14

RHODE ISLAND

Return from the Orient—Dr John M Peters Providence retiring president of the Rhode Island Medical Society and superintendent of the Rhode Island Hospital and Dr Frederick T Rogers Providence have returned after a six months sojourn in the Orient

New State Officers—The annual meeting of the Rhode Island Medical Society was held June 3 in Providence Dr Simon Flexner New York delivered an address on Lethargic Encephalitis illustrated by motion pictures The following officers were elected president Dr Jesse E Mowry Providence vice presidents Drs Herbert Terry and George S Mathews secretary Dr James W Leech (reelected) and treasurer, Dr Henry J Hoye all of Providence

Fiske Prize Awarded—Announcement was made by the president of the Fiske fund that the prize of $200 offered for the best essay on the subject Surgical Lessons from the Great War' has been awarded to Dr Allen G Rice, Springfield, Mass Under the terms of the Fiske Fund a prize of $200 annually is awarded for the best essay on a subject selected by the trustees The subject for next year is Compulsory Health Insurance" The contest is open to all physicians and details regarding it may be obtained by addressing Dr Halsey DeWolf Providence, secretary of the fund

SOUTH CAROLINA

Medical College Building Sold—The state sinking fund commission has sold the old South Carolina College building, Charleston, to Montague Triest for $12,000

Clinic Day—Clinic day was celebrated in Columbia, June 8, when more than 150 surgeons from all over the state were the guests of the Columbia Medical Society The day was devoted to clinics, and in the evening a banquet was given with addresses

Venereal Disease Clinics—A free clinic for the treatment of venereal disease is to be established in Union Local support to the extent of $4,000 has been secured, and the state board of health has agreed to furnish $2 000 This will be sufficient to carry on the work for one year

Personal—Dr Elizabeth S Van Duyne resident physician and professor of physiology and hygiene at Converse College, Spartanburg, has resigned to accept a similar position at Goucher College, Baltimore——Mrs Frances M Montgomery formerly superintendent of the Chick Springs Sanatorium and Steedly Clinic at Chick Springs will be connected with the University Sanatorium, which is just being completed at Anderson

Commencement—The annual commencement exercises of the Medical College of South Carolina were held at Charleston June 3, when degrees were conferred on a class of fourteen These faculty changes were announced Dr J P Richardson has been appointed instructor in clinical pathology, Dr J J LaRoche instructor in medicine, Dr M W Beach, instructor in pediatrics Dr H P Jenkins Jr assistant in obstetrics and medicine, Dr H S Mustard, instructor in pediatrics The college cup Dr William Rhett assistant in medicine and the Blease medal awarded the honor graduate in medicine and the Blease medal were won by Dr Harry E Levit

WISCONSIN

Fire in Sanatorium.—Damage to the extent of more than $2 000 was done by fire to the Mount Washington Tuberculosis Sanatorium Eau Claire June 19 The patients were removed without casualty

New District Officers—At the annual meeting of the Ninth Councilor District Medical Society, held in Stevens Point, May 14, Dr Victor A Mason Marshfield was elected president and Dr Joseph F Smith, Wausau, was reelected secretary-treasurer

Plaster Specialist Sentenced—The supreme court of the state has sustained the decision of the lower court which sentenced Dr" Till, the so-called 'plaster specialist' of Barron County to the county jail for six months The decision was on the ground that the defendant had had a fair trial and was properly convicted

New Clinic for Ashland—The new clinic building in Ashland recently built by Dr John M Dodd is two stories and basement in height and will contain ten complete sets of offices Dr John M Dodd has been elected president of the clinic, Dr Adellon P Andrus vice president, Dr Clyde J Smiles, secretary, and Miss E Peterson treasurer

Bedside Clinics for Physicians—A series of clinics in internal medicine with ward rounds extending over two weeks is offered for physicians at the Milwaukee County Hospital Wauwatosa, by Dr Louis M Warfield The classes are limited to six physicians Courses begin July 12, July 26 August 9 and August 23 No fee is charged Applications should be made to the superintendent, Milwaukee County Hospital, Wauwatosa Wis

Staffs Selected—The directors of the Madison General Hospital on May 19 selected a temporary staff The surgical staff will consist of Dr Thomas W Tormey, chief of staff and Drs Frederick A Davis Corydon G Dwight Louis R Head, Reginald H Jackson Walter H Sheldon and Arthur G Sullivan The medical staff will consist of Drs Hugh P Greeley Cornelius A Harper Harry M Kay, William T Lindsay, Julius C Sommers and Robert Van Valzah

Will Give Complete Medical Course—Legislation recently enacted in Wisconsin provides for the offering of a complete four-year medical course by the University of Wisconsin Medical School It is reported that the teaching of the third year will be offered in the fall of 1923 and that of the fourth year in the fall of 1924 The legislation provides also for the establishing of a state hospital at Madison A university infirmary and the Bradley Memorial Hospital have already been established on the university campus

CANADA

Professional Fees in Montreal—The Montreal Medico-Chirurgical Society has ruled that physicians hereafter shall make charges for telephone advice and prescriptions There will also be an advance in day and night fees in the near future

Center for Vital Statistics—Ottawa is now headquarters for vital statistics for Canada There will be tabulated returns from the dominion Formerly, this was done by each province All provinces will take advantage of the new method

Mental Defectives in Toronto Schools—Three hundred and twenty-five pupils have been found in eleven schools of Toronto with an intelligence quotient of less than 80 per cent Out of 122 defectives below 70 per cent, 100 are possessed of characteristic stigmas of degeneration Dr Charles K Clarke, who made the investigations recommends that the board of education segregate low grade defective children in two or more special classes, centrally located

GENERAL

Eye and Ear Men to Meet—The fifteenth semiannual meeting of the Sioux Valley Eye and Ear Academy will be held at the Hotel Fontenelle Omaha, July 14 under the presidency of Dr James E Reeder, Sioux City, Iowa

Railway Surgeons Elect Officers—At the annual meeting of the Central of Georgia Railway Surgeons' Association held in Savannah, June 3 and 4, the following officers were elected president, Dr George W Williamson, Hartford, Ala, vice presidents, Drs Benjamin L Bridges, Ellaville, Ga, and R Earl Evans, Gordon Ga, and secretary-treasurer, Dr Craig Barrow, Savannah, Ga

Specialists Hold Annual Meeting—At the annual meeting of the American Laryngological Rhinological and Otological Society held in Boston, June 2-4 the following officers were elected president Dr Lee Wallace Dean Iowa City, vice presidents Drs Harmon Smith, New York, Joseph C Beck Chicago, Joseph B Greene, Asheville, N C William V Mullin, Colorado Springs Colo, and Hill Hastings, Los Angeles, secretary, William H Haskin, New York, and treasurer, Dr Ewing W Day, Pittsburgh

Bequests and Donations—The following bequests and donations have recently been announced

Woman's and Mount Sinai hospitals New York and Middlesex N J Hospital each $5 000 by the will of Henry J Duveen New York

Vermilion County Hospital Clinton Ind a donation of $10 000 to supplement $100 000 voted by the county by Mr H M Ferguson Clinton president of the county board

Cornell University $500 000 for the endowment of research professorships and to provide facilities for scientific work a donation by August Heckscher of New York

Grant Hospital Chicago $5 000 by the will of Harry Rubens

American Hospital Neuilly donations of 250 000 francs by George Edward Kessler St Louis and 100 000 francs by Louis D Beaumont of the Aero Club of America

Gifts to Universities and Colleges—The following appropriations have been made to medical schools in the United States by the trustees of the General Education Board

Washington University Medical School St Louis for endowment $1 250,000 for additional laboratory facilities and equipment $70 000

Yale University Medical School New Haven Conn toward a total of $3 000 000 for endowment $1 000 000

Harvard Medical School Boston for improved facilities in obstetrics $300 000 for development of teaching in psychiatry $350 000

Johns Hopkins Medical School Baltimore for development of a new department of pathology (toward a total of $600 000) $40 000

The trustees of the Rockefeller Foundation have also voted the following appropriations

Dalhousie University Medical School Halifax for buildings and equipment $400 000 and for endowment $100 000

Medical Research Foundation of Elizabeth Queen of the Belgians Brussels for general purposes of medical research 1 000 000 francs

College Not Recognized—At its meeting, held June 18 at Atlanta, the National Eclectic Medical Association adopted the following resolution

WHEREAS The Regular State Medical Board of Arkansas has recently sent a resolution to every examining board in the United States calling attention to the fact that the Arkansas Eclectic Medical Board of Examiners persists in examining and licensing graduates of a nondescript medical college of Kansas City Mo primarily it may be to embarrass that college but secondarily it may be an attempt to reflect on Eclectics in general and this national body in particular

Resolved That the secretary of this Arkansas regular board be notified that the aforesaid institution is *not* recognized as an eclectic college by this body

This college is reported as not recognized in Missouri its home state, nor is it probable that it would be recognized by the regular medical boards in the adjoining states It has been reported that the college called itself eclectic in order that its graduates might appear before the Arkansas Eclectic Board of Medical Examiners and by that makeshift secure licenses

LATIN AMERICA

Plague in Mexico—One more death from bubonic plague and one new case were reported at Vera Cruz on July 4

Reorganization of the School of Medicine of Bolivia—The government of Bolivia has recently reorganized the School of Medicine of La Paz and provided funds for the school laboratories

Sanitary Information Office Organized in Chile—There has been recently organized in the department of public health of Chile a branch of the International Sanitary Commission of American Republics

Chilean Medical Delegates—A recent law adopted in Chile provides for the appointment of a medical commission which will come to the United States to study the methods followed in the antivenereal campaign

Biologic Products of Bolivia—The Instituto Nacional de Bacteriologia of Bolivia provides free to citizens of that country the following products antityphoid vaccine antianthrax serum antistaphylococcic vaccine antipneumococcic vaccine diphtheria antitoxin and tuberculin During the second part of the year 1919 75 000 ampules were distributed

Yellow Fever in Salvador—An epidemic of yellow fever was reported June 24 in the northwestern part of Salvador near the Guatemalan frontier The advices state that forty-nine cases have been discovered and that seventeen of these patients have died——Yellow fever was reported June 21, at Sonsonate in the southwestern part of Salvador

Vaccination at El Salvador—During the year 1919, 143 579 persons were either vaccinated or revaccinated at El Salvador The virus was furnished by the vaccine institute of that country——During the years 1916-1919 the uncinariasis department of El Salvador examined 84 136 persons 41 915 of whom were found infected and 12 118 of whom were cured

Cuban Delegate in the United States—Dr Fernando de Plazaola chief of the division of quarantine of the department of sanitation of Cuba has been studying in New Orleans the methods employed to control their previous plague outbreak——The department of sanitation of Cuba has designated Miss Martina Guevara chief of the public health nurses, to study nursing methods in the United States

FOREIGN

Plague in Java—The *Nederlandsch Tijdschrift* states that there were 798 cases of plague reported in Java during the month of April, with 797 deaths In March there were 936 fatal cases

Hospital Fund—The American Hospital at Neuilly, France has thus far received 2 750 000 francs toward the fund of 7 000 000 francs which is being collected for the purpose of enlarging the institution

Births Exceed Deaths in Spain—During 1919 according to vital statistics published by the *Official Gazette* there were 585 352 births in Spain and 482 030 deaths The birth rate was 28.25 per thousand and the death rate, 23 26

Monument to Dr Reymond—A monument was recently erected at Montbrison France in memory of the men from the region who lost their lives in the war and in particular of Dr E Reymond senator from the Loire district and military aviator

Bubonic Plague—June 26 bubonic plague was reported from Catania Sicily by the American consul there Several cases have occurred with two deaths——Assistant Surgeon Carl Michel U S P H S is in charge of the work against bubonic plague at Vera Cruz

Prize to Pende—Dr Nicola Pende professor of pathology at University of Palermo was recently awarded the Pallin-Valier prize by the Venice Reale Istituto for his works on the organs of internal secretion This prize is conferred for the best medical works published in the preceding period

Flechsig's Fiftieth Professional Anniversary—The first volume of Prof P E Flechsig's 'Anatomy of the Human Brain and Spinal Cord on a Myelogenetic Basis appeared May 23 the date of his fiftieth professional anniversary He has been professor of psychiatry at Leipzig since 1877 and chief of the clinic for nervous and mental disease

Postgraduate Work in London.—Physicians seeking graduate medical work in London may obtain [illegible] regard to the opportunities in that

Postgraduate Medical Association, 1 Wimpole Street, London, W 1, England Better information will be secured if, in writing, the particular kind of work desired is mentioned

Tokens of the Gratitude of France—Several American names are in the list recently published of those to whom the French government has awarded the Medaille de la reconnaissance française Among them are Drs Wyatt and Baribault, and the women physicians Drs Finley, Chills, Klotz, Doherty and Fraser, nearly all connected with the hospital at Luzancy

Monument to Living Pediatrician—Our Spanish exchanges give an account of the statue of Dr Gomez Ferrer recently unveiled at Valencia The resolution to erect the monument was adopted at the Asamblea Medica Regional held at Valencia in 1918, as a testimony of the gratitude of the mothers of Valencia to the incumbent of the chair of children's diseases at the University of Valencia, and leader in plans for welfare work for children

Medical Students and Chemical Experiments—The *Deutsche medizinische Wochenschrift* relates that in an explosion in the chemical laboratory at Munster seven students were killed, including two medical students The editor comments that this sustains his appeal for separate lectures for the medical students 'Why ' he asks should medical students have anything to do with experiments with explosives as was the case in this lamentable occurrence?"

Exhibition for Dental Hygiene—A traveling museum to educate the public in the care of the teeth has been organized in the Netherlands, and was on exhibition at Rotterdam for ten days It was organized by the national dental association with the aid of the Green Cross Society The aim of the display is said to be to educate not only the public in the care of the teeth and the dangers of neglect, but to inform the authorities as well so that they will appreciate the necessity for concerted efforts to save the teeth of the rising generation Examination of 20 000 schoolchildren in one Holland city showed carious teeth in 80 per cent Women volunteers explain the exhibits to visitors

The Crisis in Contract Practice in Germany—The *Munchener medizinische Wochenschrift* of May 28 relates that at noon May 25 all the contracts with the sickness insurance companies having expired, physicians all over the country were released from all contract obligations and the Leipziger Verband the solid front of the organized profession has ordered that from that hour the krankenkassen insured are to be treated by the physicians as private patients with cash payment at once for each service rendered The fee to be asked is 8 marks for each office call and 12 marks for each visit, with specified higher rate for extra services No certificates for the patients are to be made out but prescriptions are to be written on the physician's own blanks and marked 'No renewal" The *Wochenschrift* adds, These orders of the Leipziger Verband are to be unconditionally obeyed On the strict and invariable compliance with them depends the outcome of the conflict into which the profession in Germany has now entered Let no one think of his private advantage! The welfare of the whole is in the last line also what is best for the individual ' As THE JOURNAL has already mentioned, at the recent conference between the representatives of the organized profession and of the krankenkassen when the former stated the tentative terms on which the contracts would be renewed, the representatives of the krankenkassen got up and left the room The last mail brings word that a partial agreement has finally been reached between the parties, which is regarded as essential progress toward the desired 'free choice of physicians ' The krankenkassen have also agreed to found institutions to promote social hygiene The question of remuneration is still unsettled and had to be left to a third impartial committee

Deaths in Other Countries

Dr **Demons**, formerly professor of surgery at the University of Bordeaux——Dr **T Barrois**, professor of parasitology at the University of Lille——Dr **R Kretz**, privat-docent of pathologic anatomy at the University of Vienna and author of seventy-five articles on this and allied subjects——Dr **T Debaisieux**, former professor of surgery at the University of Louvain at one time president of the Belgian Academy of Medicine and of the Belgian Surgical Association, aged 73 His son succeeded him in the chair of surgery——Dr **K Franz**, chairman for ten years of the quackery committee of the German Aerztevereinsbund——Dr **F Schatz**, former professor of gynecology and obstetrics at the University of Rostock aged 78

Government Services

General Hospitals Named in Memory of Distinguished Medical Officers

The War Department has inaugurated the policy of naming its general hospitals in memory of deceased medical officers of the Army who have made distinguished records in the service For many years it has been the policy to identify Army hospitals by numbers and particular location of the Army camps or forts

This new policy is one which will appeal to the sentiment and traditions of the Medical Corps of the Army and will identify the medical profession more conspicuously in military affairs than heretofore

In accordance with this new policy the War Department has issued General Order No 40 which provides as follows

General Hospital No 41, Staten Island, N Y, is announced and will be known as the 'Hoff General Hospital, Staten Island, N Y," in honor of Col John Van Rensselaer Hoff, M C, U S Army (born 1848, died 1920), who throughout his entire military career devoted unremitting effort to the efficient organization and administration of the medical department and was the pioneer in the organization and development of the enlisted branch thereof, formerly known as the Hospital Corps

General Hospital No 28, Fort Sheridan, Ill, is announced and will be known as the 'Lovell General Hospital, Fort Sheridan, Ill," in honor of Surg-Gen Joseph Lovell, U S Army (born 1788 died 1836), who served as Surgeon-General of the Army from 1818 to 1836 (The first formal organization of a Medical Department for the Army was prescribed by Congress in 1818 and by virtue of that Act he was appointed Surgeon-General from Hospital Surgeon, being the first officer to bear that title)

General Hospital No 6, Fort McPherson, Ga, is announced and will be known as the 'Lawson General Hospital, Atlanta, Ga ' in honor of Surg-Gen Thomas Lawson, U S Army (born 1795, died 1861), who served as Surgeon-General of the Army from 1836 to 1861 (Awarded brevet rank of brigadier-general in 1848 for meritorious conduct in the Mexican War)

General Hospital No 19, at Oteen N C, is announced and will be known as the "O Reilly General Hospital, Oteen, N C,' in honor of Brig-Gen Robert Maitland O'Reilly, U S Army (born 1845, died 1912), who served as Surgeon-General of the Army from 1902 to 1909 and under whose administration the Medical Reserve Corps of the Army was established

General Hospital No 21, at Denver, is announced and will be known as the 'Fitzsimons General Hospital, Denver," in honor of First Lieut William Thomas Fitzsimons, Medical Officers' Reserve Corps, U S Army (born 1889, died 1917), a skilled surgeon and the first officer of the U S Army killed in the World War He met his death at Dannes-Camiers, France, Sept 4, 1917, in an air raid by the enemy while serving with Base Hospital No 5, U S Army The name also fittingly commemorates the eminent services rendered by the civil medical profession of America as members of the Medical Corps of the Army during the World War

The new hospital to be constructed on the military reservation at El Paso, Texas for which funds have already been appropriated, is announced and will be known as the 'William Beaumont General Hospital, El Paso, Texas," in honor of Major William Beaumont, Surgeon, U S Army (born 1785 died 1853) who during his service as a medical officer of the Army conducted epoch-making investigations of the physiology of digestion, and as a result of his researches became the leading physiologist of the country and the first to make an important and enduring contribution to that science

The Department Hospital, Honolulu, Hawaii, is announced and will be known as the Tripler General Hospital, Honolulu, Hawaii,' in honor of Major Charles Stewart Tripler, Surgeon, U S Army (born 1806, died 1866) who served as a Medical Director of the Army of the Potomac during the Civil War, and as a distinguished author published in 1858 his celebrated manual on the examination of recruits (Awarded brevet rank of Brigadier-General in 1865 for faithful and meritorious service during the Civil War)

The Department Hospital Manila, P I, is announced and will be known as the 'Sternberg General Hospital, Manila, P I," in honor of Brig-Gen George Miller Sternberg, U S

Army (born 1838, died 1915), eminent bacteriologist and sanitarian, who served as Surgeon-General of the Army from 1893 to 1902, and founded the Army Medical School (Awarded brevet ranks of captain and major in 1865 for faithful and meritorious service during the Civil War)

The Walter Reed General Hospital, Washington, D C, will retain its present name

The Army and Navy General Hospital, Hot Springs, Ark, will retain its present name

The Letterman General Hospital, Presidio of San Francisco Calif, will retain its present name

Foreign Letters

MEXICO CITY

(From Our Regular Correspondent)

June 27, 1920

Plague and Smallpox

The department of public health is still much concerned about the eradication of plague from the port of Vera Cruz Some sporadic cases are still occurring From April 19, when the first case was observed to June 18, there were reported thirty-nine cases with twenty-three deaths, which is a high mortality rate The campaign is being carried on with all energy, employing all the available scientific resources There is already at hand a large supply of imported antiplague serum, and prophylactic vaccinations have been made on a large scale, utilizing vaccine received from the United States and also that prepared at the Instituto Bacteriologico Nacional No time has been lost in carrying out deratization measures as well as the isolation of plague patients and suspected cases Occasionally, the authorities have had to contend with the ignorance of some families who refuse to allow their members to be sent to the pesthouse, and even with the criminal connivance of a German physician who concealed a patient and was therefore arrested Railroad communication has been reestablished from Mexico City to Vera Cruz although quarantine of passengers is enforced and merchandise disinfected Mention was made of a case of plague at Tampico, but after investigation it was found that the supposed patient had died of adenophlegmon of the axilla, following an infected wound of the hand

Many cases of smallpox have been reported in the state of Oaxaca

A New Department Planned

The Department of Public Instruction and Fine Arts, which was established in the last years of General Diaz s government, was suppressed during Señor Carranza s term of office Since 1917, the only national center of culture has therefore been the National University Its new rector, Lic Vasconcelos, has explained his intention of asking the government to reestablish the department In his opinion the department of public instruction must be a federal institution This plan, if carried out, will among other things result in correcting or abolishing several of the state medical schools, which are very far from being ideal

Child Welfare Congress Postponed

It was the intention to hold in this city the Congreso Mexicano del Niño in September As in that month there will be held the postponed presidential elections the board of directors of the congress has decided to postpone it until January, 1921 This is all the wiser, since Ing Palavicini, the president of the organizing board, has left for Europe as extraordinary ambassador of the Mexican government to Belgium, France, England, Italy and Spain

BELGIUM

(From Our Regular Correspondent)

May 30 1920

Death of Bersaques

By the death of Dr Charles de Bersaques, one of the most active members of the Societe de medecine de Gand Flanders loses one of its most eminent surgeons Dr Bersaques was a very capable operator and had attained an enviable position at the Hopital de la Biloque He wrote several important works especially on congenital club-foot and surgery of the large intestine

The Effects of War on Children

M Dubois presented before the Academie royale de Belgique certain data regarding the weight and height of Liege children between the ages of 6 and 17 years, in 1918 These data are based on observations of children who presented themselves at the canteens for debilitated children, and they include curves of the weight and height of boys and girls arranged in groups according to their state of health

It appears from these findings that the classical figures of Quetelet are too low to apply to the present average population of our towns that the children who escaped impairment of health up to 1918 were affected during that year and that at that period of the war the debilitated children were much below the average weight and height of normal children although they did not present any determinable symptoms of disease

At a subsequent meeting of the Academie M Duthoit reported the physical condition and development of children in 1915-1919 He was attached to the schools patronized by Her Majesty the Queen and paid careful attention to the development of 600 children between the ages of 2 and 6 who were in care of these institutions He showed the importance of a careful medical inspection of schoolchildren, and pointed out that tuberculosis was not highly prevalent among these children, but that rickets was found in 25 per cent of the young children while the older children were, in general quite robust M Duthoit called attention to the fact that in the Yser region infants are generally healthy and sound from birth and that the high mortality in the first year must be attributed to the almost total abandonment of breast feeding and the absolute ignorance of the mothers It is his hope that the infant clinics which were established during the war will be continued and extended, as they are destined to bring excellent results

Anglo-Belgian Congress of Hygiene

An Anglo-Belgian congress of hygiene in which representatives of other allied nations also participated was held at Brussels May 20 25 The purpose of the congress was not to discuss abstract problems and to broach complex scientific questions but to study the best means for protecting children, for improving the housing conditions for combating tuberculosis and venereal diseases and for promoting industrial, municipal, military and tropical hygiene England has made great progress in these fields, and the creation of a ministry of health promises to render this progress more rapid and more certain

As Belgium faces the same contingencies an exchange of ideas between British and Belgian hygienists and a comparison of practical solutions would seem to be both interesting and highly advantageous

The congress organized by the Royal Institute of Public Health of England with Dr Rene Sand as Belgian secretary had a success beyond all expectations 800 members were registered from England and 200 from Belgium More than 300 papers were presented at the congress, which

divided into the following sections social hygiene, military, naval and tropical hygiene, municipal hygiene, industrial hygiene, hygiene of employed women (maternity protection and infant welfare), and bacteriology and chemistry The main topics were the prevention of venereal diseases, regulations for the reconstruction of towns, and especially the lessons of the war from the point of view of military hygiene Particular attention was given to the question of lighting as related to the hygiene of the industrial worker

PARIS

(From Our Regular Correspondent)

June 17, 1920

School Community Centers and Hygiene

Schoolbuildings are intended primarily for educational purposes but by virtue of a law which permits of their use by certain qualified persons specified in the text, they have latterly been appropriated to public purposes There has been a tendency to make the school more and more a place for public gatherings and a refuge for services of every nature foreign to school purposes As a result, the class rooms are often occupied from 8 a m to 10 p m, and the continuous occupation of the premises prevents thorough disinfection and cleansing, while the presence of a large number of people constitutes in some measure an agency in the propagation of infectious diseases and a permanent danger to the health of the schoolchildren The Conseil d hygiene of the department of the Seine recently resolved to take all possible measures to restore the schools to their legitimatet functions and to restrict their use for purposes other than teaching

French Literature in the United States

The Comite 'France Amerique' has recently designated a subcommittee of ten prominent men of France, including Dr Henri Roger, *dean of the Paris faculty of medicine* with directions that they prepare a monthly list of ten new French works which are particularly deserving of the attention of the public, more especially of Americans One book will be chosen from each of the following categories intellectual life, history and political science, economics, industry, commerce and finance, novels, poetry and art, ancient and modern literature and literary criticism, philosophy and sociology, law, medicine and foreign travels These monthly lists will be published in French and English and will be sent to libraries, universities, editors, publishers and interested individuals in America

Gift to the Medical Faculty of Strasbourg

At the last session of the University of Strasbourg announcement was made of a gift to the medical faculty by Messrs Andre and Edouard Michelin of French government bonds yielding an annual income of 50 000 francs This is to be used for creating a prize for that scientist of France or allied nations who shall first discover an effective preventive or remedial agent for tuberculosis by experimentation on guinea-pigs or cattle The donors do not desire that human experimentation be undertaken From now and until the prize shall be awarded, the income is placed at the disposal of the Faculte for the establishment and support of a laboratory devoted exclusively to research on tuberculosis under direction of the professor of hygiene and bacteriology of the medical faculty

In choosing the University of Strasbourg for the award of the new prize, Messrs Michelin are giving expression to the feeling of pleasure which pervades all France at the return of Alsace and Lorraine to France, and they are testifying to their trust in the future of the great city where Pasteur did his earliest work

Under the special regulations which will govern the award, the candidates for the prizes must furnish proof of the efficacy of the remedial agent before a committee composed of the dean of the medical faculty of Strasbourg, one professor named by the council of the faculty, the director of the Institute of Hygiene and Bacteriology of Strasbourg, the director of the Pasteur Institute of Paris, and a professor named by the council of the medical faculty of Paris

Death of Professor Demons

Dr Demons, former professor of clinical surgery at the Faculte de medecine de Bordeaux, died recently at the age of 78 Born in 1842 at Saint-Ciers-de-Canesse (department of the Gironde), Demons studied medicine at Bordeaux University was appointed surgeon to the hospitals of Bordeaux in 1869, and at the foundation of the medical faculty became associate professor of surgery In 1886 he was made professor of clinical surgery, which position he occupied until his retirement in 1911 Dr Demons was national correspondent for the Academie de medecine from 1882, and was one of the organizers of the French congress of surgeons, over which he presided in 1891

LONDON

(From Our Regular Correspondent)

June 19, 1920

Clinical Units in Medical Schools

A new departure which consists in the formation of "clinical units" in the medical schools, has already been mentioned in these columns The University Grants Committee has issued an important memorandum on the subject, pointing out that their origin is twofold the advance of medicine itself and the evolution of the form of medical education Medicine itself was revolutionized in western Europe first by the renaissance, and then in our own times by the advance of biology in the middle of the last century, and the discovery of the etiology of infective disease in the last half of the century These things gave a new content to medicine and formed the basis of profound changes Then, in the second place, there has been an evolution in the education of the physician A century ago he became a physician by apprenticeship, this was followed in due course by what may be called the hospital system—in other words, an application of the apprenticeship system on a large scale in the wards of a hospital, lastly, there came the more systematic education of the medical student in the preliminary sciences and the intermediate subjects before he was trained on the clinical side The clinical unit is not a sudden offshoot or "outcrop," but a further stage in a long process of evolution The relation to the state to this evolution began with various medical acts, and more recently the subsidizing of medical education by the government In 1912, Abraham Flexner's Report on "Medical Education in Europe" was published, and *inter alia* it advocated a development of medical teaching by the formation of clinical units

The British system of clinical teaching has been an applied apprenticeship by means of clerking and dressing, which has at least four great advantages (1) The student himself became an observer and a physician, (2) a close personal relationship was established between the student and patient, (3) the art of medicine was taught by practice, and (4) the student was holding a responsible office and cultivating his sense of responsibility These four points have proved invaluable, and have resulted in producing a good standard of physician, perhaps indeed the best in the world But there are disadvantages (1) The student's work tends to become empiric and not sufficiently inspired by the science of medicine, (2) the student is in the main brought into associa-

tion with the end-results of disease, and is insufficiently equipped to deal with disease at its beginnings, (3) instruction in clinical work tends to become discontinuous and unsystematic, his studies in biology and chemistry, in anatomy, physiology and pathology are systematized and organized on a scientific basis, his clinical instruction is, on the contrary, in a large degree unorganized

While these virtues are great, the defects are serious and they become more serious from the advances of medicine They are greatest in London, which has not a centralized teaching university like Edinburgh and other university centers, where the germ of clinical units and, indeed, almost their essentials have existed These conclusions are reached 1 The latest advances in sciences which affect medicine—chemistry and physics, anatomy and physiology pathology and pharmacology—should be continually brought into the teaching of the clinical subjects and applied to the observation and treatment of disease 2 In order that education may be of this scientific standard and that students may come into direct contact with knowledge at its growing point, there is needed a system of instruction by teachers actively engaged in scientific research 3 Such teachers must be provided with proper equipment, adequate staff and sufficient time if their work is to be comparable with the best scientific and practical teaching of say a professor of physiology The system of clinical units is designed to secure these ends It should consist of three parts or units which should be interrelated and separable, dealing with medicine surgery and obstetrics (including gynecology) respectively In each of these subjects a clinical unit should include a professor or director, who would devote the greater part of his time to teaching, treatment and research, competent above everything else to teach, of sound scientific training and possessing scientific imagination, who shall have (*a*) an adequate whole-time and part-time staffs, (*b*) the control of wards (from fifty to 100 beds) (*c*) a proper and effective outpatient department, (*d*) ample laboratory accommodation for research and pathologic work, (*e*) adequate scientific equipment for effective clinical teaching and (*f*) a postmortem service Such units should work along with and supplement the ordinary ward services, in which practical teaching will still be carried on as before But while the ordinary services are organized only for the immediate needs of the patient and the practical training of students the clinical unit will, in addition, be especially equipped for scientific instruction and scientific research

Dangerous Drugs Bill

The second reading of the dangerous drugs bill in the House of Commons has taken place In moving it, Major Baird, undersecretary to the Home Office said that it was to give effect to the international opium convention of 1912, which aimed at controlling throughout the world the traffic in opium and cocain and their preparations During the war, Great Britain found it necessary to take action on her own account, owing to the spread of the cocain habit and the smuggling in the East, which caused trouble and delay with our merchant shipping in connection with China A regulation was made to control the manufacture sale and distribution of cocain, and a proclamation was issued prohibiting the importation of cocain or opium except under license These measures did not prove altogether successful owing largely to the difficulty of controlling smuggling of an article which could be brought in in such small quantities and so easily concealed as opium The only effective control must come from international cooperation The allied powers attached so much importance to this question that the ratification of the international convention of 1912 was made one of the conditions of peace, and embodied in the peace treaty The bill seeks power to extend the provisions of the measure to any new derivative of morphin or cocain, or any drug likely to produce the same effect as these substances

Munificent Rockefeller Gift to Medicine

The Rockefeller Foundation has offered the following gifts for the furtherance of medical education and research in this country To University College Medical School the sum of $2,000 000 "toward a building and equipment program, substantially as submitted by the authorities of the school, and the further sum of $2 175,000 toward the support of clinical facilities and teaching in substantial conformity at the outset with the proposed plan" making a total of $4 175 000 for the medical school To 'the University of London in behalf of the University College, the sum of $950 000 toward a building and equipment program substantially as submitted by the authorities of the college and the further sum of $900 000 toward the endowment of laboratory teaching in substantial conformity at the outset with the proposed plan," making a total of $1,850 000 for the college and a grand total of $6,025,000 At a meeting of the staff and students the provost of University College said that he believed that the gift was the greatest single one ever made for educational purposes in this country In moving a resolution of appreciation for this munificent and spontaneous gift, Dr Elliott Smith, professor of anatomy in University College, said that it would insure that the requisite facilities for anatomic teaching and research, in close conjunction with those in physiology and pharmacology would be provided in accordance with the scientific requirements of the time The general scheme of anatomic teaching in this country was in a curious position There was for instance, no equipment for allowing students to study, in the anatomy department, such parts of the body as could be seen only by the artificial aid of a lens or lenses There were no facilities for showing sections of embryos or for allowing students to study this essential part of their work. Nor were there any facilities for the study of the experimental factors which determined the form of the body It was now hoped to bring back to anatomy the parts of the subject, such as histology and embryology which had been taken away from it It had been the settled policy of University College to restore anatomy to the position which it should occupy, not only in the medical curriculum but also in the field of research

VIENNA

(From Our Special Correspondent)

June 16, 1920

Socialistic Methods and Eight-Hour Day in Hospital Work

Since the radical change of government came into being in this country one institute after the other has been conducted on socialistic lines with only little attention being paid to the desirability of such measures from the standpoint of effectiveness In the hospitals also all the latest ideas in regard to socialization have been introduced In addition to inaugurating the eight hour day, a working board (Betriebrat) had to be elected from among the hospital staff in such a way that each group of employees delegated a number of representatives to this board the physicians, the nurses the clerks the artisans the machine hands and the patients have their representatives The board is the real manager of the hospital which 'runs the whole thing No person be it physician or charwoman may be dismissed without the counsel of the board and the dietaries as well as the regulations of the daily work are controlled by this council Naturally, such a condition which the medical staffs have repeatedly but vainly opposed only tends to hamper seriously the efficacy of the medical work By the adoption of the eight hour day through-

out the whole state in all occupations, the number of nurses had to be trebled, and the men engaged in permanent work (engines, automobiles, stoves) in the hospitals are now working in three shifts, meaning a double or treble expenditure Things have taken such a turn that a few weeks ago a clinical attendant who had not protected the interest of the charwoman in a sufficient degree roused the anger of the majority of the working board of our general hospital They demanded his dismissal for that reason Of course, this demand was not fulfilled by the government But the union of the hospital directors and heads of the ward addressed, in their turn a memorandum to the board of health (the government), pointing out that the present conditions are intolerable They chiefly demand that the unduly large nonmedical hospital staff be reduced While in peace time and even during the war, two or three nurses were sufficient to minister to all needs of the patients of a ward, and stood always in close contact with their patients, now eight or ten nurses are attending the same number, without even a fraction of former satisfaction to the patients Formerly, utmost care was extended, now carelessness is not infrequent The nurses, the real sisters of former times, have been replaced by a female nursing officer who works eight hours, not a minute longer, like a factory girl

Naturally, the bad effect is felt by all patients, from 6 a m to 2 p m one sister nurses him, from 2 to 10 p m another, and then the night sister Severely ill patients do not get the attention they require, furthermore the number of patients in many hospitals is nearly equal to or exceeds but slightly the number of persons employed in the hospital an unnatural condition The consequence is that each patient costs the hospital from 65 to 85 kronen a day in the municipal hospital, even 115 kronen, while the hospitals get from the public treasury only 78 kronen It is impossible to make both ends meet under such circumstances These conditions tend to turn the hospitals into 'asylums for nurses and hospital employees' as the memorandum styles it, and are a crime against public interests The directors also make concrete suggestions toward the satisfactory working of their institutes

They first of all demand that only such nurses be employed as are prompted to their work by the earnest desire to give real help to the sick and all patients—not merely to put in eight hours All sisters should be housed within the hospital, as is the case in all other civilized countries They should be unmarried If they marry, they may be employed in the outpatient department, in the laboratory or in private nursing but not in the wards of surgical theaters The medical staff, female or male, should be subject to the same restriction As long as they work in the wards or clinics, they should be single and live in the hospital Whole time appointments should be the rule The interests of the hospital require all the skill of the physician The clerks and other members of the hospital may be appointed in such numbers that they complete their work in the normal eight hours, but they must actually work and not merely play politics Of course they cannot be denied the right to take advice in matters pertaining to their work but it is an impossible condition that through the working board each man feels Nothing can happen to me, I cannot be dismissed" The consequence is that the efficiency of the work has suffered very severely The memorandum demands that the directors should be entitled to dismiss without the assent of the board every person who does not fill the post he is in and allot to him the work he is fit for The arrangement of working boards is not suitable for public hospitals or humanitarian institutes, working not for profit Their influence must be limited to advisory and disciplinary measures, but must not interfere with the effective working of the hospital and the financial situation of all these institutes must be taken into consideration, without paying attention to political desiderata

Holland Assists the Libraries of Austrian Scientific Institutes

An appeal for books and periodicals for our libraries has found a lively response in Holland these last few weeks By the activity of Dr Dijkgraf, the ancient University of Leyden and the technical school of Delft have arranged collections of such works and publications as are mostly needed for our schools The action will extend not only to books, but also to scientific material (glass tubes, chemicals and dyes) and to money contributions to enable the institutes to run for a while, at least on part time Parts of these gifts have arrived already, and were distributed where they were most wanted It may be added that the technical laboraotry of our university, for instance, only just escaped being closed for want of material

Contamination of the Milk Supply

The supply of milk to Vienna has for a long time been a matter of serious concern both to the board of health and to the board of nutrition The quantity of 900,000 liters (about 220 000 gallons) required daily has not even approximately been reached for about four years Milk tickets had to be handed out to infants and children up to 6 years, entitling them to from 0 25 to 1 liter daily, according to age, if the milk was obtainable As a rule, only infants under 1 year get about 0 75 liter (a pint and a half), the other children getting about half this allotted quantity, or none at all, as luck might bring Lately even these reduced supplies were cut down still more and a high percentage of the milk arrives in a sour condition, while a large quantity of the remainder has been pronounced contaminated by the inspecting officer In fact no ordinary cows milk is now delivered to Vienna which is fit to be given to an infant This is chiefly due to a curtailment of the railway traffic, owing to the lack of coal, and to the ill will of the peasant population, which refuses to send food to Vienna Condensed milk has to be imported on a large scale from England America and Switzerland to feed our children But the exorbitant price, due to exchange rates, is a bar to the extended use of this substitute, as far as the great bulk of our population is concerned, while the fresh cows milk arriving in antiquated vessels, and obtained by primitive methods, is not a reliable form at all

Marriages

JOHN JONIKAITIS, Boston, to Miss Carolyn A Eckes of Jersey City, N J in New York City June 24

FREDERICK WILLIAM FERGUSSON, Starkweather N D, to Miss Laura Jane Johnston of Chicago, June 2

WARREN JAMES DUCKETT, Jersey City N J, to Miss Clara Belcher Hopkins of Dover, N H, April 19

FREDERICK HOWARD FALLS, Chicago, to Miss Margaret Haseltine of Berkeley, Calif, recently

DANIEL SCHENK LEE Guymon, Okla to Miss Lillian Erline Willoughby of Liberal, Kan., May 11

ERNEST WALTER TONKIN to Miss Florence Bertha Hicks, both of Edwardsburg, Mich, June 24

SIMON HARRY ROSENTHAL, Lynchburg Va, to Miss Bettye Greenberg of Danville Va, June 6

EDWARD HAGOP BEDROSSIAN to Miss Angele S Adourian, both of Philadelphia, April 28

JOHN PEARL GOODRICH to Miss Isabelle Esther O'Leary, both of Bangor, Me, June 26

JULIUS ARKY HAIMAN to Miss Frances Alexander, both of New York City June 20

BENJAMIN BARKER BEESON to Miss Mildred Helen Bronson, both of Chicago, recently

Deaths

Major-General William Crawford Gorgas ⊕ former Surgeon-General of the United States Army and President of the American Medical Association in 1909-1910, died in London July 4 Early in May, General Gorgas left the United States for the west coast of Africa, to head a sanitary commission of the Rockefeller Foundation, arriving in London, May 19 He proceeded to Brussels, where he was decorated by King Albert, and after a tour of Belgium and of the Rhine district around Coblenz, he returned to London Here he suffered an attack of cerebral hemorrhage on the morning of May 30, since which day he had been critically ill at Queen Alexandra Hospital, where he was attended by Brig-Gen Robert E Noble, U S Army and by medical officers of the British Army Full military honors were accorded to him at his funeral, July 9, at St Paul's Cathedral, London, which was attended by representatives of King George and of the government services, and by members of the medical profession and the scientific world His body will be returned to the United States in a government transport.

William Crawford Gorgas, the son of Gen Josiah and Amelia Gayle Gorgas, was born at Mobile, Ala, Oct 3, 1854 In 1875 he graduated A B from the University of the South, after which he studied medicine at Bellevue Hospital Medical School receiving his M D degree in 1879 He served an internship at the Bellevue Hospital and then entered the Army as surgeon with the grade of lieutenant, June 16, 1880 His first service was at Fort Brown, Texas, where he contracted yellow fever, a circumstance which influenced and guided the future career of the young physician Under military occupation of Cuba from 1898 to 1902, Dr Gorgas served as health officer of Havana, which had a long history of endemic yellow fever with periodic outbreaks in epidemic form When late in 1900 the Army yellow fever board under direction of Major Walter Reed discovered the causative relation of the stegomyia mosquito to the transmission of yellow fever, Major Gorgas immediately directed practical measures of control based on that discovery, with the result that by the end of 1901, Havana and its environs were free from the disease for the first time in centuries In recognition of this brilliant achievement in preventive medicine, Dr Gorgas was promoted in 1903 to colonel and assistant surgeon-general by special act of Congress, in 1904 as chief sanitary officer of the Panama Canal, and later as member of the Isthmian Canal Commission, he directed the intensive sanitary campaign which transformed a veritable 'pesthole of the Pacific' into habitable domain and made possible this triumph of American engineering without the great sacrifice of life which had doomed all earlier attempts to failure He was nominated surgeon-general, Jan 16, 1914 with the rank of brigadier-general and by special act of Congress in 1915, he was created major-general for life in reward for his scientific attainments in the sanitation of the Canal Zone He served as surgeon-general virtually throughout the World War, and reached the statutory age limit, Oct. 3, 1918, only a few weeks before the signing of the armistice, but continued on special duty until the end of hostilities

General Gorgas was in international request as an authority on hygiene and sanitation and repeatedly advised foreign governments regarding special medical problems At the invitation of the British government he went to South Africa in 1913, and there made important recommendations for the prevention and control of pneumonia among the miners In 1915, he headed a commission under the auspices of the Rockefeller Foundation to study the foci of yellow fever and other tropical diseases in South America and Central America He made further investigations in Ecuador after the war

In recognition of his services to humanity and his contributions to science, he was the recipient of marked honors from the governments, universities and learned societies of many countries He was awarded the Distinguished Service Medal of the United States and was made commander of the Legion of Honor of France, he was knighted by King George of England and decorated by King Albert of Belgium, as well as by rulers of other foreign countries Honorary degrees were conferred on him by the University of Pennsylvania, University of the South by Harvard, Brown Alabama, Tulane, Johns Hopkins, Oxford, Lima and other universities He was awarded the Mary Kingsley medal from Liverpool School of Tropical Medicine (1907), a gold medal of the American Museum of Safety (1914) and a special medal from the American Medical Association (1914) Besides being President of the American Medical Association in 1909-1910 he was a member of the American Society of Tropical Medicine American Public Health Association, and Association of Military Surgeons, honorary fellow of the New York Academy of Medicine, and of the College of Physicians of Philadelphia and associate member of the Societe de pathologie exotique de Paris

WILLIAM CRAWFORD GORGAS, 1854-1920

Frank Edwin Brown, Brooklyn, Columbia University, College of Physicians and Surgeons, New York, 1903, aged 40, captain, M R C, U S Army with service in France with Base Hospital 62 at Mars-sur-Allier and in the St Mihiel and Argonne offensives and discharged May 14, 1919, a specialist in surgery, a member of the Medical Society of the State of New York, a member of the attending staff of the Methodist Episcopal Hospital Brooklyn died in that institution, June 23, after a surgical operation

Finley Ellingwood, Chicago, Bennett College of Eclectic Medicine and Surgery Chicago 1878, aged 68, professor of chemistry from 1884 to 1900 and of materia medica and therapeutics from 1900 to 1907 in his alma mater, editor of the *Chicago Medical Times* from 1884 to 1906, author of several textbooks on eclectic materia medica and therapeutics, died at Pasadena, Calif, June 29

Charles Daniel McCarthy, Malden, Mass , University of the City of New York, 1882, aged 59, a member of the Massachusetts Medical Society and once president of the Malden Medical Society, one of the founders of and surgeon to the Malden Hospital, and at one time mayor of the city, died June 22, from cerebral hemorrhage

M H E Whitesides, Timpson, Texas, Memphis Tenn Hospital Medical College, 1888, aged 62, once president of the Shelby County Medical Society, for eight years chief surgeon of the Houston East and West Texas and Texas and Gulf railways, appointed a member of the State Board of Health in 1909, died, June 10

George Edwin Davenport, Vancouver, B C., University of Vermont Burlington 1889, aged 57, formerly surgeon of the Colorado Midland Railroad, a member of the International Association of Railroad Surgeons, for several terms a mem-

⊕ Indicates 'Fellow of the American Medical Association

ber of the New Hampshire state legislature, died, May 31, from heart disease

James Robert Sanford, Covington Tenn, University of Nashville, Tenn, 1857, Jefferson Medical College, 1857, aged 88, assistant surgeon of the Seventh Tennessee Cavalry C S A, during the Civil War, for several years president of the Tipton County Poard of Health, died, June 21

Frederick W Rogers, Hartford Wis, College of Physicians and Surgeons, Chicago, 1889, aged 57, for more than fifty years health officer of Hartford, and local surgeon for the Chicago, Milwaukee and St Paul System, died, June 15, from cerebral hemorrhage

Benjamin I Berman, Norfolk Va, Medical College of Virginia, Richmond 1909, aged 46, a member of the Medical Society of Virginia, while crossing a street, June 16, was struck by a motorcycle, and died from his injuries fifteen minutes later

Claude Humphrey Addleman, Indianapolis, Indiana University, Bloomington and Indianapolis, 1920, aged 26, an intern in the City Hospital Indianapolis, died in that institution, June 16, from septicemia a week after a surgical operation

George F Cline, Columbus, Ind, University of Louisville Ky 1893, aged 56, a member of the Indiana State Medical Association, coroner of Bartholomew County, died in the Southeastern Indiana Hospital, Craigmont, from arteriosclerosis

John Lyon, Greenwood, S C, Medical College of the State of South Carolina Charleston 1900, aged 46, a member of the South Carolina Medical Association, for several years a member of the State Board of Medical Examiners, died June 21

Oliver P Hopping, Mt Pulaski, Ill, Illinois Medical College Chicago, 1896, Missouri Medical College, St Louis, 1897, aged 50, died at St Johns Hospital Springfield, Ill, June 11, from pneumonia following influenza

William Preston Snyder, Kimberton, Pa, University of Pennsylvania, Philadelphia 1873, aged 63, formerly auditor general of Pennsylvania, state senator, and representative, died, June 20, from cerebral hemorrhage

Rufus Walter Athey ⊕ Marietta, Ohio, University of Wooster, Cleveland Ohio, 1890, aged 55, died in Tremont Hospital Marietta, June 5 from hypostatic pneumonia, eleven days after an operation for appendicitis

John Menzer Ward, Manchester, Tenn, Medical College of Indiana, Indianapolis, 1882, Rush Medical College, 1893, a member of the Tennessee State Medical Association, died, June 9, from cerebral hemorrhage

Lawrence D Neary, Torrington Conn, Georgetown University, Washington D C 1913 aged 32, a member of the Connecticut State Medical Society, died at the home of his father in Waterbury, June 1

Carey Lee Lamborn, Philadelphia, formerly of Penns Grove, N J, University of Pennsylvania Philadelphia 1896, aged 49, a member of the Medical Society of New Jersey, died, June 24

Andrew Jackson Davis, Charleston, Iowa (license, Iowa years of practice 1886), aged 75, a practitioner for forty-five years, died at the home of his daughter in Keokuk, Iowa, June 15

John Christopher Mitchell, Brockville, Ont, Trinity Medical College, Toronto 1875, for ten years superintendent of the Ontario Hospital for the Insane, Brockville died, May 2

John P Paxton, Paterson N J, Long Island College Hospital, Brooklyn, 1872, aged 69, a member of the Medical Society of New Jersey, died, June 16, from heart disease

Otis H Deck, Herkimer, N Y, Albany (N Y) Medical College, 1894, aged 56, a member of the Medical Society of the State of New York, died June 13, from heart disease

R M Henderson, Wake Ark, license, State Medical Board, Arkansas, 1903, aged 82, for forty-three years a practitioner of Baxter County, died, June 18, from senile debility

Hiram J Hampton, Tampa, Fla, Georgia Eclectic Medical College Atlanta 1879, aged 68 formerly secretary of the eclectic board of examiners of Florida, died, June 7

Thomas F Wurtsbaugh, Richwood, Ohio Eclectic Medical Institute, Cincinnati, 1886, aged 75, a veteran of the Civil War, died, June 19, from pulmonary tuberculosis

Clayton C Quillian, San Antonio, Texas, Atlanta Ga Medical College, 1886 aged 61, a member of the State Medical Association of Texas, died, June 18

Correspondence

"THE IMMEDIATE STERILIZATION AND CLOSURE OF CHRONIC INFECTED WOUNDS"

To the Editor —Dr Hyman's letter (THE JOURNAL, June 12, 1920, p 1663) concerning the dangers attendant on the method of closing chronic infected wounds published in THE JOURNAL, May 8, illustrates the serious error into which one may fall who does not read carefully If one after ample opportunity to observe the method in use at Fort McPherson can comment as does Dr Hyman in his letter, it shows that even the simple concept expressed in the title of the article has not been grasped and an explanation for those who may not carefully note the directions and warnings given of necessity with brevity in the original article is offered For efficient sterilization a powerful, penetrating caustic, zinc chlorid, is used, the safety in the use of which depends, first, on the surgeon's ability to prevent its entering the blood stream during its application and secondly, on the prompt operative excision of all tissues impregnated with the caustic Our experiments of which Dr Hyman quotes only the control, show that zinc chlorid is rapidly converted by the blood into a nontoxic compound Thus while a fraction of a drop of a saturated solution of zinc chlorid rapidly injected into the marginal ear vein of a rabbit is instantly fatal, a drop of this caustic held in the ear veins three minutes by compressing the base of the ear produces no systemic effect Likewise, the temporary use of a tourniquet protects in the dog when several minims of the saturated solution are injected into the saphenous vein In human practice no systemic symptoms have been observed when a tourniquet has prevented the entrance of blood from the injected area into the body during and for five minutes after the injection For regions that cannot be guarded by a tourniquet, the zinc should never be applied by forcible injection but by packing all sinuses with cotton pledgets wrung out of the solution Having introduced the caustic especially if in the region of important structures the surgeon is morally obliged to excise promptly all the chlorided tissue Dr Hyman's reference to frequent hemorrhages after the use of this method is based on two cases in which operation was performed in my absence that well illustrate what is not the method and what the surgeon should not do In the first case, a sinus from the femur, there was inadequate exposure of the bone and an incomplete excision A jagged edge of femur was left against the exposed femoral artery and the wound filled with Dakin tubes After about ten days of Carrel-Dakin treatment, recurrent hemorrhages requiring ligation occurred and finally resulted fatally In the second case, a perforating sinus of the femur the external half of the sinus was properly treated by sterilization excision and suture, but the important inner half of the sinus close to the femoral artery was drained and the chlorided tissue not excised As would be expected, the corrosion progressed to violent hemorrhage on the third day, and partial gangrene of the foot followed a ligation of the femoral artery That we had no case of secondary hemorrhage or paralysis in our series of about 350 cases treated by the method is due to the fact that thorough excision and immediate suture were considered the most important parts of the operation One need not hesitate to treat sinuses adjacent to a large vessel if he has the skill to excise them properly The danger of the method lies far less in the zinc chlorid than in the timidity and incompetence of the surgeon, and even one clumsy enough to cut a hole into the femoral artery, as I did in one case, may escape ill results if he does an immediate arterial suture and carefully surrounds

the artery with living muscle To excise timidly and incomplely, to drain or to 'Dakinize" is contrary to the technic and is to invite danger and failure The skin may be left open to avoid tension, but the deep tissues must be well opposed The method was by far the most efficient treatment for chronic infected wounds that was tried at Fort McPherson, and at the Army Hospital at Fox Hills while the method was temporarily abandoned until the need of a tourniquet was appreciated the wounded soldiers themselves requested that it be resumed, and Capt Donald Cragin reports very satisfactory results in about ninety cases Only with the exodus of the reserve officers experienced in this method to civilian practice, and entirely against the desire of the commanding officers, was this treatment discontinued at Fort McPherson

W WAYNE BABCOCK, M D, Philadelphia

PRESENTATION OF CRAMPTON BLOOD PTOSIS TEST IN 1904

To the Editor —In the article on "A Cardiovascular Rating as a Measure of Physical Fatigue and Efficiency," by Major Schneider (THE JOURNAL, May 29, 1920, p 1507), reference is made to my "blood ptosis test' as being presented first in 1913 with two other tests This is in error My test was first presented at the Olympic Congress in St Louis in 1904 It was published in the *American Physical Education Review* in 1905-1906 in an extended article on 'Recent Investigations in Sciences Underlying Physical Education" It was then published in the *New York Medical News* Sept 16, 1905 The error is no doubt merely an inadvertence Its correction, however, is important and I would be grateful if you would be good enough to print this statement

C WARD CRAMPTON, M D, Battle Creek, Mich

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer s name and address but these will be omitted on request

MODES OF CONVEYANCE OF SCARLET FEVER

To the Editor —In Anders Practice of Medicine Edition 13 p 198 speaking of the modes of conveyance of scarlet fever the statement is made that the disease may also be transferred by persons who have been in the sickroom while they themselves e cape Outside of the possibility of harboring the germ in the mouth nose or throat in what manner could the disease be transferred? Again the statement is made that it is also communicated by fomites and the poison of car latina contained in the clothing retains its infective power for months ' and any objects (furniture books utensils toys etc) which the patient has handled may serve to communicate the poison' and again the infection may be air borne though not for any great distance Are the foregoing statements supported by the weight of authority today? Aside from the conveyance by direct contact with the infected patients when they sneeze cough or expectorate or from drinking glasses or eating utensils is there a single reliable instance in which the germ of scarlet fever has been carried by fomites or in the clothing and in this way spread and communicated? How could there be communication on account of the patient s handling furniture books or toys? Has any one ever obtained a culture from the desquamation scales? What proof is there that it is an air borne disease even for a short distance unless one is in close proximity to the infected patient and comes in contact with the sputum or droplets from the mouth or nasal ecretions? Finally if all that is necessary is individual quarantine and isolation of the patient why enforce a rigid household quarantine and follow by the useless formaldehyd fumigation when recovery has taken place? HENRY FARRELL M D Kearney Neb

ANSWER —The general conception of the mode of conveyance of scarlet fever assumes that the essential cause of the disease is present in the secretions from the throat, nose, ears etc

If this assumption is true, then anything which is contaminated by such secretions and mechanically carries them may serve to spread the disease Such carriers include a large number of animate and inanimate agents, such as hands eating and drinking utensils, clothing toys foods and air In the absence of strong currents, air will carry moist particles only a short distance before they fall to the ground from their own weight Foods may not only mechanically carry the scarlet fever virus but also furnish conditions in which it will multiply It is generally thought that the essential cause of scarlet fever remains alive and virulent after drying and that this may be true for a long time if the disinfecting action of light is excluded In this way have been explained apparently well-authenticated instances of scarlet fever transferred by toys, clothing, etc, even after a long time

Since the cause of scarlet fever has not been identified cultures from desquamation scales, etc, would add no information of value For the same reason it is impossible to speak of the mode of spread of scarlet fever with the same accuracy and assurance as can be done with diphtheria and typhoid fever

If personal isolation is efficiently accomplished there is little apparent reason for household quarantine There has been a disposition among hygienists in recent years to substitute for formaldehyd fumigation which is often of doubtful value thorough airing and sunning and the liberal use of soap and water

THE NATURE OF MEDICAL PRACTICE ACTS

To the Editor —Why are osteopathy and chiropractic allowed to be practiced if they have no scientific basis?
Please omit my name and address A R

ANSWER —The regulation of occupations professions and trades by the state comes under what is known as the police power of the state This is the right of the state to restrict and regulate the acts of its citizens for the public good Medical practice acts are not for the benefit of the medical profession or for its protection against competition It is not the business of the state to settle scientific questions regarding the relative value of different methods of treatment of disease All the state can do for the protection of the public against ignorant and incompetent persons is to establish educational standards or qualifications and to require all persons who desire to follow certain occupations professions or trades to comply with those standards or qualifications This is what the majority of laws do so far as the medical profession is concerned they establish a standard for those who treat the sick which standard requires certain educational and professional qualifications Physicians comply with these requirements, they have to do so But as the standard for physicians is too high for practitioners of certain cults—osteopaths, chiropractors, Christian Scientists, etc—certain legislatures have passed laws exempting them We are not able to answer our correspondent s question because we do not know why legislatures pass such contradictory legislation

ARTIFICIAL RESPIRATION IN THE NEWBORN

To the Editor —Would you please let me know when was first described in the United States the method of artificial respiration for the newborn apparently asphyxiated which is known in France under the name of American or Dewes method and mentioned by Professor Audebert in 1897 in the *Journal de médecine de Bordeaux?*

J O TOULOUSE France

ANSWER —J Harvie Dew described his method before the New York Academy of Medicine in 1893 His paper Establishing a New Method of Artificial Respiration in Asphyxia Neonatorum ' was published in the *Transactions* of the New York Academy of Medicine 1893 p 80, and in the *Medical Record* **43** 289 1893 and *Buffalo Medical and Surgical Journal* **33** 665 1893 A Spanish translation was printed in *Anales de obstetricia, ginecopatia y pediatria* **14** 104, 1894

REMOVAL OF MERCUROCHROME STAINS

To the Editor —Please suggest some efficient remedy to remove mercurochrome stains from the clothing without injuring the cloth and color B F Rockford Ill

ANSWER.—Mercurochrome stains may be removed from the skin by rubbing first with 2 per cent potassium permanganate solution and then with 2 per cent oxalic acid solution (THE JOURNAL Jan 3, 1920 p 31) This method m[illegible] be tried for stains on cloth As a prelim[illegible] determine whether or not this of the cloth itself This is L ment to an out of the way p

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA Montgomery July 13 Chairman Dr S W Welch Montgomery
CONNECTICUT Hartford July 13 14 Sec, Regular Board Dr Robert L Rowley 49 Pearl St, Hartford
CONNECTICUT Hartford, July 13 14 Sec, Regular Board Dr Robert Edwin Hair, 730 State St, Bridgeport Sec Homeo Board Dr Edwin C M Hall 82 Grand Ave New Haven
DISTRICT OF COLUMBIA Washington July 13 15 Sec, Dr Edgar P Copeland, The Rockingham Washington
INDIANA Indianapolis, July 13 15 Sec Dr Wm T Gott, Crawfordsville
MASSACHUSETTS Boston July 13 15 Sec, Dr Walter P Bowers Room 144, State House, Boston
NEW MEXICO Santa Fe July 12 13 Sec, Dr R F McBride Las Cruces
OKLAHOMA Oklahoma City, July 13 14 Sec Dr James M Byrum, Mammoth Bldg Shawnee
SOUTH DAKOTA Deadwood, July 13 Sec, Dr Park B Jenkins, Waubay
WEST VIRGINIA Charleston July 13 Sec Dr S L Jepson, Masonic Bldg Charleston

Colorado April Examination

Dr David A Strickler, secretary, Colorado State Board of Medical Examiners reports the written examination, held at Denver, April 6, 1920 The examination covered 8 subjects and included 80 questions An average of 75 per cent was required to pass Of the 23 candidates who took the physician's and surgeon's examination 10 including 7 osteopaths, passed, and 13 including 2 osteopaths and 1 undergraduate, failed Fifteen candidates were licensed by reciprocity The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Yale College	(1875)	75
Kansas City College of Medicine and Surgery	(1920)	78 1
Kansas City University of Phys and Surgeons	(1919)	80
FAILED		
St Louis College of Physicians and Surgeons	(1919)	71 2
Eclectic Medical Institute Cincinnati	(1908)	46 2
Undergraduate		67 9

College	Year Grad	Reciprocity with
LICENSED BY RECIPROCITY		
Rush Medical College	(1902)	Michigan
University of Illinois	(1911)	Illinois
College of Physicians and Surgs Keokuk	(1880)	Kansas
Indiana University School of Medicine	(1917)	Indiana
Harvard University	(1910)	Mass
University of Missouri	(1903)	S Dakota
St Louis Medical College	(1889)	Missouri
Washington University Medical School	(1919)	Missouri
Hahnemann Medical Coll and Hosp Philadelphia	(1903)	Kansas
Jefferson Medical College of Philadelphia	(1915)	Penna
Women's Medical College of Pennsylvania	(1915)	Penna
University College of Medicine Richmond	(1913)	W Virginia
University of Vermont	(1914)	Connecticut
University of Naples	(1908)	France

District of Columbia April Examination

Dr Edgar P Copeland secretary, District of Columbia, Board of Medical Supervisors reports the oral and written examination held at Washington, April 13 15, 1920 The examination covered 16 subjects, and included 80 questions An average of 75 per cent was required to pass Of the 12 candidates examined, 10 passed and 2 failed Eight candidates were licensed by reciprocity The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Georgetown University	(1916) 78 4, (1917)	86 8
George Washington University	(1917)	78
Howard University	(1919) 81 9, 83	83 4
Loyola University	(1918)	81 3
Medical College of Louisiana	(1905)	89 6
Johns Hopkins University	(1918)	84
Meharry Medical College	(1916)	76 4
FAILED		
Coll of Med and Surg (Physio Medical), Chicago	(1911)	68 1
Columbus Medical College	(1884)	56 3

College	Year Grad	Reciprocity with
LICENSED BY RECIPROCITY		
Tulane University	(1916)	Louisiana
University of Maryland	(1915) (1916)	Maryland
University of Pennsylvania	(1912)	Penna
Vanderbilt University	(1910)	Tennessee
Medical College of Virginia	(1914)	Virginia
University College of Medicine Richmond	(1912)	Maryland
University of Virginia	(1891)	Maryland

Book Notices

THE PRINCIPLES OF ANATOMY AS SEEN IN THE HAND By Frederic Wood Jones D Sc M B B S Professor of Anatomy in the University of Adelaide Cloth Price $5 net Pp 325 with 125 illustrations Philadelphia P Blakiston's Son & Co 1920

Frederic Wood Jones is a scientific anatomist whose previous work shows that he desires not only knowledge but also understanding He says "In the study of the hand we are immediately brought face to face with some of the most important biologic problems and some of the most striking exhibitions of general principles It is for this reason that the hand has been selected as a limited and self-contained study from which the student may learn more of principles and less of details than is usual in complete textbooks of anatomy" The book may be commended to those who, earnest in the cause of medical education, see the fundamental sciences only from the practical side, and who believe that teachers of anatomy should have the surgical point of view Jones has seen "well taught but wholly unlearning students" who have been trained by such teachers, and he is sorry for them By methods of patient drudgery and brute force of memorizing they have learned many dead facts about the dead hand But it is not a dead hand which the author invites the student to consider in this book. It is one full of character and life—of life which has been continuous from the beginning of life on the planet and of character which has been slowly but clearly stamped on the living structures as we have traveled the long road of evolution "Man's place in nature is largely writ upon his hand" The author considers whether these characters are new or were acquired long ago far back along the road and so became firmly impressed on the tissues, whether they are progressive or regressive whether they are highly specialized in the human animal or whether they are a part of the original heritage of the stock No study of structure can be intelligent which is not also a study of function The author considers the hand as a working part of a working organism Its efficiency depends not only on its own structure but more on the capacity and control of its cooperation "It is the lower animals which show the anatomical advance from a primitive condition which we retain but as a cortically controlled structure the human hand affords striking evidence of man's superiority over all the other members of the mammalia It is not the hand which is perfect but the whole nervous mechanism by which movements of the hand are evoked, coordinated and controlled' In considering the mechanism of this control Jones regards the tissues as living things, and their study is endowed by him with vital interest Although the book is limited to the hand, the author has made a valuable contribution to the study of anatomy in general, for no student can study one organ as he will be led to study the hand through this book without developing habits of observation and of thinking, and these are permanent General principles if only they are seen even in but one part, illuminate every other part and the mind of the student so that the study of structure can never again be uninteresting drudgery but will rather be a source of ever renewed interest satisfaction and understanding

THE PRACTITIONER'S MANUAL OF VENEREAL DISEASES WITH MODERN METHODS OF DIAGNOSIS AND TREATMENT By A C Magian M D Ancien Eleve de l'Hopital St Louis Paris Cloth Price $3 St Louis C V Mosby Company 1919

The author states that this book was written only for the general practitioner but he indulges in lengthy excursions into the history of syphilis and gonorrhea, and furnishes in another chapter an elaborate description of the technic of the Wassermann test Inaccuracy in using medical terms and in describing pathologic processes is frequent throughout the text He says 'Sloughing and gangrene may follow' One might suggest that sloughing is the consequence of gangrene The author overlooks the important differentiation between incontinence and frequency of desire for urination The views of the author with regard to pathology are illustrated by the statement that continuous straining may cause abscess

and fistula Inflammation of the testicles is defined in parenthesis as gonorrheal epididymitis, and this is followed by the remark that the affected testicle swells rapidly That in treatment of acute anterior urethritis the author recommends the forcing of permanganate solution, administered by percolator irrigation, through the urethra into the bladder, will cause many a urologist to raise his eyebrows To mention packing of the urethra with medicated gauze in the treatment of gonorrheal urethritis is unnecessary, to say the least In the chapter on treating syphilis, the author enumerates sixty different drugs, every one of them obsolete as to use, after having cautioned the reader to purge his library of all but the most modern textbooks and pamphlets on syphilis It may be doubted whether subcutaneous and intramuscular injections of neo-arsphenamin may be given without any risk, as the author asserts Such immature attempts at hurriedly writing a medical book cannot be too severely criticized

VENEREAL DISEASE ITS PREVENTION SYMPTOMS AND TREATMENT By Hugh Wansley Bayley M C Cloth Price $4 25 net Pp 102 with 54 illustrations Philadelphia P Blakiston s Son & Co 1920

Another attempt to cover the prevention, symptomatology and treatment of the venereal diseases in a book of 146 pages, and—another failure The only chapters that come up to the standard of such a publication are the one on Legislation and Prophylaxis and one on Instructions on Conducting a Venereal Clinic Only colored pictures may be expected to be instructive in the diagnosis of syphilis, but the crudeness of the black and white plates presented destroys even the limited claim to usefulness that noncolored illustrations may have It is surprising to have a supposedly professional pathologist tell us that a urethral discharge may be caused by gout or rheumatism, and to have him use the term "tubercular" instead of tuberculous' epididymitis, or have him divide the symptoms of intolerance to arsenic compounds into vasomotor and toxic symptoms In the treatment of syphilis he does not mention the use of intravenous injections of mercury, so useful in nervous and eye complications Epididymotomy does not find a place in the chapters on gonorrhea and its complications, and the author fails to call attention to the importance of early operation for prostatic abscess The Guyon capillary catheter also seems to be unknown to the author A plate meant to illustrate the microscopic appearance of a gonorrheal smear taxes to the utmost the imagination of the reader The comic relief in the tragedy of gonorrhea is furnished when the author, in discussing latent gonorrhea, reminds us that "criminals who are wanted by the police do not frequent the main thoroughfare, but frequent the sidestreets and alleys, so the gonococcus may lurk unsuspected in ducts and glands that surround the urethra along its whole length" Teaching is an art, and writing a medical textbook calls for more thorough preparation and more concentrated application to the work than is manifested in this publication

UEBER HAMOPHILIE BEIM WEIBE Kritische Studie nebst Erorterung der gynakologischen Blutungen Von Prof Dr C Bucura Paper Price 11 20 marks Pp 92 Vienna Alfred Holder 1920

The sum and substance of this monograph on hemophilia in the female is that there is no such thing as hemophilia in the female An analysis of 197 cases reported as such in the literature leads the author to the conclusion that not one of these cases meets the requirements for establishing the existence of true hemophilia according to the strict definition of the disease This conclusion is in harmony with the prevailing view that true hemophilia is a hereditary disease, transmitted from father to grandson through the daughter without the daughter, herself, exhibiting the disease Cases of excessive tendency to hemorrhage in the female are always to be attributed to some other cause than true hereditary hemophilia, a point of importance in diagnosis and treatment The author's investigations throw no new light on the etiology of hemophilia He accepts the view that it must depend on an inherited chemical abnormality of the protoplasm of the formed elements of the blood and of the vessel walls Possibly lack of thrombokinase in the blood platelets is an important factor, although there is no general deficiency in the thrombokinase

Medicolegal

Illegal Quarantine to Examine for Venereal Disease

(Ex parte Dillon et al (Calif), 186 Pac R 170)

The District Court of Appeal of California, Second District, Division 1, in ordering that these petitioners for a writ of habeas corpus be discharged from the custody of the chief of police of Los Angeles, says that they were arrested, without a warrant, for the alleged violation of a city ordinance which made it unlawful for any person to resort to any rooming house, lodging house, hotel or other place in the city, for the purpose of having therein sexual intercourse with a person to whom he or she was not married, and they were held in a sort of quarantine It appeared that whenever persons arrested for violating this ordinance were brought to the city jail they were, by the chief of police, held without bail and under a pretended quarantine by reason of a general instruction given by the health department of the city, and without any knowledge being had on the part of the health department or its inspectors which would give rise to reasonable cause, or suspicion, that the persons so detained were afflicted with contagious or infectious venereal disease It was stated that for two years or more it had been the practice of the health department to examine all persons brought to the city jail charged with the violation of the ordinance or charged with any other offense involving sexual immoralities or lewdness, to determine the freedom of such persons from contagious and infectious quarantinable venereal disease, that about 1,000 persons had been examined within such time, and that about 90 per cent of the women so arrested and charged were found to be afflicted with contagious and infectious venereal disease in some form

The right of the health authorities to subject the person of an individual afflicted with contagious disease to quarantine restraint is an extreme measure, recognized as being necessary in cases of epidemics and instances in which such detention is necessary to protect properly the public health Sick persons who are subjected to such quarantine are not deemed to be criminals, and are to be treated with every consideration and afforded conveniences reasonably procurable under the circumstances

The court assumes, for the purposes of this case, that the arrest was legally made It may be assumed too that under the laws relating to the public health inspection and quarantine may be made of persons animals and property by the duly constituted health authorities, when it is known, or appears on reasonable ground, that the person so subjected to inspection or quarantine is afflicted with contagious or infectious diseases such as are enumerated in Section 2979 of the Political Code But the question here was whether the health department might reasonably assume, without any previous knowledge information or report as to the individual concerned, that every person arrested by officers and booked at the city jail as having violated the rooming house ordinance was reasonably likely to be afflicted with a quarantinable venereal disease Virtually the health officers through their orders to the chief of police, said to the individual

We don t know whether you are guilty of this offense or not if you were guilty we think it would furnish reason to suspect that you are afflicted with a venereal disease but whether guilty or innocent you have been arrested and you must remain confined without bail and without being permitted communicaton with the outside world except with our consent until you have submitted to a private examination and convinced us that you are free from the taint of disea e

The bare statement of this proposition, considered in view of all the safeguards which have been thrown around the liberty of the individual, is shocking to our sense of justice When sufficient cause exists to believe that a person is afflicted with a quarantinable disease, there is no doubt of the right of the health authorities to examine int c case and, in a proper way determine the f nary investigation must be made without in- ing is found to be justifiable only

may be resorted to as are reasonably necessary to protect the public health, it being remembered that the persons so affected are to be treated as patients, and not as criminals

Recovery for Services Not Supported by Evidence

(Huntley v Geyer (N D), 175 N W R 619)

The Supreme Court of North Dakota reverses a judgment that was obtained by the plaintiff for services, and remands the case for a new trial, because improper evidence was admitted and necessary evidence was lacking The court says that it appeared from the evidence that the professional services for which the plaintiff, a physician and surgeon sought to recover were rendered in the treatment of one Walter Geyer, a son of the defendant At the time the services were rendered Walter Geyer was about 24 years of age He was making his home with his parents but was operating an adjoining farm for himself The plaintiff testified that about a certain date one of Walter Geyer's brothers came to the plaintiff's office and informed the plaintiff of Walter's illness and obtained some medicine for him The plaintiff further testified that at that time the brother stated that he had been sent by the defendant to consult the plaintiff with regard to Walter's illness This testimony was admitted over the objection that there was no showing that the son who called on the plaintiff had been authorized by the defendant to do so, and that the alleged statements were hearsay as to the defendant and inadmissible The objection was overruled and the evidence admitted but the supreme court is of the opinion that it was error to permit the plaintiff to testify to the statements which he claimed the defendant's son made at the time he called the plaintiff to treat Walter Geyer The defendant denied that he had sent the son, or had in any manner requested or authorized the calling of the plaintiff The plaintiff made no showing whatever that the son had actually been sent by the defendant Clearly the plaintiff's testimony as to what the son said would not be admissible to prove that the defendant had sent him It was purely hearsay And in view of the condition of the evidence in the case the court is not prepared to say that the admission of the evidence did not affect the result

The defendant contended also that there was no evidence tending to show either that the compensation of the plaintiff had been agreed on or that his services were reasonably worth the amount awarded, and the court believes that this contention was well founded There was no evidence tending to show that the amount of the plaintiff's compensation was fixed by agreement Nor did the plaintiff or any one else testify that the services rendered by the plaintiff were reasonably worth the amount for which the plaintiff recovered judgment or any other amount The plaintiff contented himself by stating what he had done, and identifying certain charges he had made on his books therefor Nowhere did he testify that the services were reasonably worth what he charged for them In the absence of an express agreement as to amount, the law implies a promise to pay for a physician's services as much as they are reasonably and ordinarily worth on the professional market When a physician seeks to recover for such services, he has the burden of proving their value

May Testify to Making Examination but Not as to Result

(Livingston v Omaha & C B St Ry Co (Neb) 175 N W R 667)

The Supreme Court of Nebraska says that in this personal injury case, in the direct examination with respect to her physical condition before the accident the plaintiff testified that she never had any venereal disease or taint, nor had she taken any treatment for any ailment of that sort The examining physician for the juvenile court testified that it was her duty to examine those coming under its care, that in her official capacity she examined the plaintiff in 1911, when she was brought by the juvenile authorities to her for that purpose, and that from the examination she reached a conclusion as to the plaintiff's condition at that time, that in 1912 the plaintiff came voluntarily and received treatment On objection by the plaintiff, the witness was not permitted to testify respecting the plaintiff's condition in 1911, nor as to whether she discovered anything abnormal in her condition in 1912 Another physician, who was called by the defendant, was permitted over objection, to testify that the plaintiff had called on him for an examination before her marriage and before the accident But he was not permitted to answer the question as to for what purpose, or to determine for what that examination was made The supreme court sees no error in this It holds that when a plaintiff offers testimony in chief tending to prove freedom from venereal disease it is competent for the defendant to offer testimony tending to show that the plaintiff called on and was examined by a physician, but such physician cannot testify as to the result of his examination

Cutting Hole in Bladder—Skill and Care Required

(Kennard v Westerman (Mo) 216 S W R 938)

The Supreme Court of Missouri, Division No 1, in affirming a judgment for $15 000 damages in favor of the plaintiff says that it was alleged that the plaintiff, being troubled with a fibroid tumor of the uterus, went to the defendant for an operation for its removal he having represented to her that he was specially skilled in the performance of such operations having performed 500 operations of like character The alleged negligent acts on which the case was submitted to the jury were that, in performing the operation, the defendant negligently and unskilfully cut a hole in the plaintiff's bladder, and that either during the operation or during one of the operations thereafter performed by him, he so cut or tied off the plaintiff's left ureter as to cause it entirely to lose its functions and to atrophy and to cause the plaintiff's left kidney also to lose its functions and to atrophy The defendant admitted that he cut the hole in the plaintiff's bladder but averred that it was not negligently done but that it became necessary for him to make such cut in removing the tumor He also admitted having performed two subsequent operations for the purpose of closing the hole but averred that they were unsuccessful for the reason that the parts were diseased

Negligence may be inferred from the facts If the legitimate inferences which may be drawn from the facts establish negligence the case of negligence is made To a woman friend that was in the operating room at the solicitation of the plaintiff, the defendant said "That is a perfect operation, perfectly successful" Not a word was said about cutting the bladder Nor did the defendant tell the plaintiff about it for a month during which time he was telling her and her friends that she was getting along nicely Then, when the plaintiff complained about the constant flow of urine, and told him that she believed he had injured her bladder he said that he had cut the bladder and taken out the diseased portion and there would have to be a second operation Moreover when the necessity arose for a third operation, and the plaintiff wanted an eminent physician called in to assist the defendant became enraged and used some rather forceful language, with the result that the operation was performed without the presence of the other physician The very conduct of the defendant tended to show guilt Besides all this, the plaintiff was examined both before and after these operations by different physicians, and none of these found any evidence of a cancerous or diseased condition, nor did the surgeons who afterward operated three times to get the cut closed The evidence also showed that the cutting or tying of the ureter would kill the kidney, and it tended to show that the plaintiff had been normal in all these parts, but now there was no life in the left kidney A fair inference from these facts would indicate that the defendant had destroyed the left ureter in one of his operations There was no error in submitting the case to the jury by the overruling of the defendant's demurrer to the evidence of the plaintiff

Nor was there error in an instruction which told the jury that the defendant as a surgeon having undertaken to operate on the plaintiff and remove a fibroid tumor and the uterus, 'in performing this operation it became and was his duty to exercise reasonable skill and care as an ordinarily skilful and careful surgeon is accustomed to exercise and use in

like surgical operations under like circumstances" It was contended that the instruction covered the whole world's physicians, while the defendant's efficiency should have been gaged by "the degree of skill possessed by reasonably skilful surgeons in the community in which he is practicing" But the court holds that that contention cannot be sustained There should be no limiting to the local vicinity of the practitioner The weight of authority is against that doctrine

But, even if the instruction was technically wrong, this would not avail the defendant in this case The plaintiff sued him as a specialist in this line of operations The rule applicable to his case has been stated thus

> A physician holding himself out as having special knowledge and skill in the treatment of particular diseases is bound to bring to the discharge of his duty to a patient employing him as such specialist that special degree of skill and knowledge possessed by physicians who are specialists in the treatment of such diseases in the light of the present state of scientific knowledge

Insufficient Indictment for Practicing Illegally

(People v Devinny (N Y) 125 N E R 543)

The Court of Appeals of New York, in reversing a judgment of conviction of the defendant of practicing medicine without a license, holds insufficient an indictment which accused the defendant "of the crime of practicing medicine without being registered and legally authorized (as required by Section 161 of the Public Health Law) committed as follows The said Devinny, on May 27, 1918, and for a considerable time immediately prior thereto, at Albany, in this county, unlawfully practiced medicine, he not being then registered and legally authorized" as in the statute required and provided The court holds that the indictment was not defective because it did not negative all of the cases set forth in Section 173, enumerating cases not to be affected The court says that in the case at bar if it should be held that an indictment must negative all of the cases referred to in the statute as not being unlawful it would be drawn out to intolerable lengths, and even after that had been done, the burden doubtless would rest on the defendant of proving that he came within the excepted cases But the court thinks that it was necessary for the present indictment to set forth one detail of the alleged offense, which in this particular case would very likely involve and lead to setting forth generally the details of the offense It is abundantly established that in charging an offense committed on or in respect of an individual, as diagnosing, treating or offering to diagnose or treat, a disease, it is necessary to name, or excuse naming by proper allegation, such individual There is an exception to this general rule When the crime consists of a series of acts continuous in their nature such as carrying on a prohibited business, or keeping an unlawful resort, a general description reasonably including and describing the series, will be sufficient It is not necessary in such cases to set forth each act going to make up the offense In the court's opinion, however, this indictment does not come within that exception It does not seem to the court that the statute was intended to define or constitute the prohibited offense as consisting of a continuous series of acts amounting to the conduct of a business within the decisions referred to It may be that if the court had nothing but Section 161 prohibiting the 'practice" of medicine, and were relegated to the dictionary or common usage for a definition of that word, the court would be compelled to interpret it as meaning a continued and habitual performance of acts But the court is not thus left to these means of reaching a definition Section 160 defines what practice means Its meaning is satisfied whenever and as often as an individual "holds himself out as being able to and offers or undertakes to diagnose, treat," etc Whenever within the fair meaning of those terms on a single occasion an offender has held himself out as able to and has offered to treat a patient there has been a completed offense, and it is not necessary to show that this operation has been repeated so many times that it has ripened into a habit or business If this is the correct interpretation there is no question that the individual operated on should have been named or proper excuse given for not naming him even within what has been said in cases applying the 'business" rule

Society Proceedings

COMING MEETINGS

Montana State Medical Association Helena July 14 15

AMERICAN PEDIATRIC SOCIETY

Thirty Second Annual Meeting Held in Highland Park Ill May 31 June 2 1920

The President, DR THOMAS S SOUTHWORTH, New York, in the Chair

Segregation of Pneumonia

DR THOMAS S SOUTHWORTH, New York Segregation of pneumonia patients may have been practiced by thoughtful physicians, but the idea has not found its way into the general medical conscience, nor has it been advised widely in our literature Evidence of the infectiousness of pneumonia is not wanting I have for years insisted, when possible, on the prompt isolation of the first case of pneumonia among children having measles, with a resulting limitation of the number of cases and I have extended segregation to all the pneumonias The obligation is imperative to anticipate the day, not far distant, when the movement to control the scourge of pneumonia may make the retention of such cases in the general ward as repugnant to our medical sense of propriety as the retention of an open case of pulmonary tuberculosis

Studies on Blood Sugar Effect of Blood on Picrate Solutions Limitations of Lewis-Benedict Method

DRS DAVID MURRAY COWIE and JOHN PURL PARSONS, Ann Arbor, Mich Blood contains substances other than sugar which induce a color change in the picrate solution employed in the modified Lewis-Benedict blood sugar method Under normal conditions these substances do not interfere with the established normal range for this method Under pathologic conditions several of these substances which showed the most marked influence were epinephrin acetone and diacetic acid Creatinin may interfere but does so in a less marked degree if we consider the comparative nonsensitiveness of the picrate solution to these substances

DISCUSSION

DR OSCAR M SCHLOSS New York It seems probable that under normal conditions it is an essentially accurate clinical method though it has a moderate error such as is present in any colorimetric method I have used the Lewis-Benedict method and a control series in which the method of Bertrand was used The Lewis-Benedict method gives results that are constantly higher but the difference is consistent and does not influence the results of observations made in normal cases

DR DAVID MURRAY COWIE, Ann Arbor, Mich The effect of heat on picrate acid solutions has been a matter of discussion, and very different opinions are held The experience of Addis and Benedict, as well as our own, is that the prolongation of the heat produces an increase in the intensity of the color In regard to the acetone, we have not run tests beyond ten minutes, but up to that time a color change has been produced

Epidemic Lethargic Encephalitis

DR L E LA FETRA New York It is evident both from the difference in the lesions and from the results of animal experimentation that poliomyelitis and epidemic encephalitis are distinct diseases I have not found that this disease follows influenza with sufficient regularity to warrant one in stating that it is caused by influenza though influenza may predispose the patient to infection or increase the virulence of the prevalent virus Of eleven children four died There was no relationship between any two of the patients and they did not live in close proximity to each other In only two was there any history of influenza When the disease was well under way the outstanding features were lethargy, general weakness and ptosis or paralysis of the

ocular or facial muscles, with double vision in several instances In the fatal cases the leukocyte count was higher than in the cases ending in recovery The spinal pressure varied In most cases globulin was present, with increase in the number of cells The fluid was sterile on culture Recovery took place very gradually Two patients showed serious sequels, one imbecility and one spasticity and mental impairment The disease has to be differentiated from tuberculous meningitis, poliomyelitis, cerebrospinal syphilis, brain tumor and meningism The mortality of the disease is about the same as that of poliomyelitis In how many damage to the brain may show later it is too soon to state

DISCUSSION

DR ROWLAND G FREEMAN, New York According to accounts, the disease has invariably occurred after influenza and not after other conditions Little is known with reference to the ultimate results of the disease, however, the outcome is not altogether favorable

DR HENRY HEIMAN New York It is sometimes impossible to differentiate between epidemic encephalitis and tuberculous meningitis if the tubercle bacillus cannot be found Loewe and Strauss have shown that the disease can be diagnosed by animal inoculation The eyes should be examined to detect the presence of choroid tubercles

DR CHARLES GILMORE KERLEY New York The symptom that has impressed me in this disease is the great variability of the symptomatology Only one symptom is constant, and that is the high degree of stupor, which resembles opium narcosis

DR. JOHN HOWLAND Baltimore The disease is more common than is generally believed and is difficult of recognition in its atypical forms on account of the relatively slight changes in the spinal fluid Sequels may persist for a long time We have had patients return on account of abnormal symptoms particularly at night Some have been apparently normal in the daytime but at night exhibited an almost maniacal condition This sleeplessness may last for weeks

DR ALFRED HAND, Philadelphia One patient slept twenty hours out of twenty-four and showed double ptosis Another patient had double ptosis of the eyelids, strabismus, and slight rigidity of the neck Lumbar puncture revealed the spinal fluid under pressure The fluid contained no tubercle bacilli, which excluded tuberculous meningitis

DR OSCAR M SCHLOSS, New York Encephalitis occasionally complicates measles and scarlet fever Last winter I saw two such cases The symptomatology of so-called "encephalitis lethargica" is practically identical with the sporadic cases seen for some years

Significance of Xanthochromia of the Cerebrospinal Fluid

DR ISAAC A ABT, Chicago My patient was 37 days old at the time of death and of eight months' gestation Specimens of fluid contained red cells, increased globulin and increased cell count, most of the cells being polymorphonuclears Necropsy revealed a fibrinous hemorrhagic meningitis and encephalitis There were subpial hemorrhages marked internal hydrocephalus, subacute pyelitis and bronchopneumonia

DISCUSSION

DR J MILTON MILLER Atlantic City, N J This condition was present in a child 3 weeks old The first and second lumbar punctures were negative Ventricular puncture revealed a yellowish, gelatinous fluid not coagulated

Acute Cerebrocerebellar Ataxia

DR J P CROZER GRIFFITH, Philadelphia This condition is not common, but it occurs more frequently than is ordinarily supposed—an acute hemorrhagic encephalitis involving the cerebellum, and which may be designated acute cerebellar encephalitis There are always symptoms indicating an involvement of the large brain as well, and for these the title cerebrocerebellar encephalitis or cerebrocerebellar bulbar encephalitis is to be preferred The degree to which the process involves one or another part of the brain varies In the majority of cases some infectious disease has preceded the attack The prognosis, so far as life is concerned, is good The disease leaves no traces in the majority of instances Lumbar puncture was performed in all my cases and was always negative

Nature of Reducing Substance in Urine of Children Suffering from Nutritional Disorders

DR OSCAR M SCHLOSS, New York My experiments do not confirm the work of Langstein and Steinitz showing that this reducing substance is lactose or galactose The only reducing substance which we have found constantly present in perceptible amounts has been glucose There is usually a nonfermentable reducing substance similar to that found in normal urine This may be lactose, but its amount is too small to identify it with certainty

DISCUSSION

DR DAVID MURRAY COWIE, Ann Arbor, Mich In these cases in which you did not find a reducing substance like glucose or lactose did you run the acetone test?

DR HENRY HEIMAN New York Was an attempt made to exclude glucose and then to test for pentose and galactose?

DR OSCAR M SCHLOSS, New York Acetone and creatinin would of course be present in the nonfermentable fraction Both substances were excluded the acetone by boiling and the creatinin by first precipitating with mercuric nitrate solution If pentose was present it could be present only in the nonfermentable fraction The proportion was so small that it was difficult to determine its presence with any degree of certainty

Relation of Bodily Mechanics to Cyclic Vomiting and Other Obscure Intestinal Conditions

DRS FRITZ B TALBOT and LLOYD T BROWN, Boston Poor bodily mechanics are surprisingly prevalent among children and can easily be corrected by proper exercises or an abdominal support Correcting the improper posture often corrects chronic constipation and hastens the cure of recurrent vomiting and the cure of certain types of attacks of acute abdominal pain in children

DISCUSSION

DR CHARLES GILMORE KERLEY, New York I have found practically the same things true except that I have always attributed the faulty posture and distension of the abdomen primarily to a defect in the intestinal tract A roentgen ray study of these cases almost invariably reveals an elongated sigmoid It is remarkable what an abdominal support will do for these patients It seems to me it is the faulty structural condition rather than faulty mechanics that is the primary cause of the trouble

DR GODFREY R PISEK, New York The use of the lead tape to show the changes in the curve of the back chest and abdomen when the patient is in proper and improper posture is a great help in the correction of faulty posture

Epidemic of Hemorrhagic Diarrhea Due to Streptococcus Mucosus

DR A D BLACKADER Montreal Canada Of sixty-five cases the larger proportion were children under the age of 6 years The attack began abruptly with high fever, nervous symptoms and vomiting and diarrhea set in early Mucus and blood appeared in the stools and the amount increased rapidly until in the severe cases they seemed to form almost all of the stool The attack lasted from a few days to twenty-one days The presence of *Streptococcus mucosus* in the stools associated with other streptococci and large numbers of colon bacilli, and the absence of any *Bacillus dysenteriae* indicated that the streptococcus must be regarded as the chief organism in the production of the epidemic The milk supply seemed to be excluded as the source of the epidemic

Phlyctenular Ophthalmia and Its Relation to Tuberculosis

DRS BORDEN S VEEDER and T C HEMPELMANN, St Louis Of 196 children with phlyctenular disease, skin tuberculin tests were positive in more than 92 per cent The results of the complement fixation tests for tuberculosis were strik-

ingly similar to those obtained in cases of proved tuberculosis Tuberculous lesions involving other organs than the eye were definitely demonstrable in more than one half, and seemed probable in almost two thirds of the cases Children observed over periods of one year or more showed an even greater proportion of tuberculous lesions, more than four fifths of this series giving such evidence Cough, malnutrition and a history of exposure to other cases of tuberculosis were frequent.

DISCUSSION

DR JOSEPH BRENNEMANN Chicago Dr Gibson and I found a positive tuberculin test in 98 per cent of the cases We started our investigation thinking phlyctenular disease was not a tuberculous condition, and we left it convinced that it was either a manifestation or an accompaniment of tuberculosis Finding this condition, however, is not sufficent ground for saying that a child has tuberculosis

DR HENRY J GERSTENBERGER, Cleveland Another factor that may have some relation to this condition is the exudative diathesis If one takes a careful history of children with tuberculosis it will be found that many have eczema or intertrigo

DR FRITZ B TALBOT, Boston In a series of 100 cases of phlycenular disease, 21 per cent showed signs of tuberculosis In chronic cases of phlyctenular disease the von Pirquet tests were all positive, though many of the children showed no other signs of tuberculosis

DR. T C HEMPELMANN We obtained a very slight history of lesions attributable to exudative diathesis Such statistics as we were able to obtain showed phlyctenular disease no more frequent in children having the exudative diathesis than in others We employed old tuberculin in the treatment of these cases, starting with 0 000001 mg, and we have not been convinced that either local recovery or general improvement resulted

Pneumonia in Infants and Children

DR HENRY HEIMAN, New York Of 336 cases of pneumonia in children, 288 were bronchopneumonias and forty-eight were lobar pneumonias The mortality was 16 6 per cent With the exception of the 2 to 5 year period, the mortality varied inversely with the age A variety of organisms were found in the sputum, including the influenza bacillus, pneumococcus, streptococcus and staphylococcus, but none in sufficient predominence to justify conclusions The most frequent complication was otitis media, which occurred in seventy-five of the 336 cases Of prime importance in the treatment of pneumonia in children is hygienic care and efficient nursing I would not recommend the general use of digitalis in children, since, as a rule, the pulse is not lowered or the blood pressure raised by this agent The promiscuous use of dry cupping is to be condemned

DISCUSSION

DR ROWLAND G FREEMAN, New York There is no method of treating pneumonia so valuable as fresh air, and the colder the air the better the result I have never seen cold air harm a patient with pneumonia, and I have seen it do a great deal of good For many years I did not use digitalis in children, but recently I have been using it in large doses and have found it valuable, especially when given early to older children

DR A D BLACKADER, Montreal, Canada Alcohol may be used with advantage in some cases It should be used as a drug and the dose carefully regulated Digitalis disturbs the stomach Fresh air is desirable but the line should de drawn at flowing air and drafts Rest is most important, and for this reason hydrotherapy should be used with moderation

DR RICHARD M SMITH, Boston To conserve the outgo of energy it is a good plan to give codein

DR E W SAUNDERS, St Louis Potassium iodid is useful to loosen up a tenacious sputum that blocks the bronchial tubes, and is responsible for keeping the temperature higher than it otherwise would be

DR. HENRY HEIMAN, New York I am in favor of fresh air but not cold air, fresh air contains as much oxygen as cold air In the application of hydrotherapy I never use a cold sponge, if cold water is not used, fear and shock are avoided Potassium iodid does no good

Relative Efficiency of Mercurial Preparations in Treatment of Congenital Syphilis

DRS WALTER R RAMSEY and O A GROEBNER, St. Paul Mercurial ointment, 50 per cent, is to be preferred to the less concentrated preparations, and should be repeated not more often than twice weekly instead of daily Calomel ointment is absorbed less rapidly and to a less extent than mercurial ointment and should therefore be given in greater concentration twice weekly Mercuric salicylate in oil should be given hypodermically twice weekly instead of once Mercuric chlorid by hypodermic injection, although the dose is very small, continues to be eliminated for several days, but the fact that its use is frequently followed by the appearance of protein in the urine should exclude it from the treatment of syphilis Calomel by mouth is absorbed in small amounts and continues to be eliminated for a considerable time so that it is probable that it would be sufficient to give it at intervals of several days without producing diarrheas Mercury with chalk is absorbed to a small degree and eliminated rapidly so that fairly large doses repeated daily would probably be necessary to maintain mercury in the circulation

Incidence of Hereditary Syphilis

DRS P C JEANS and JEAN V COOKE St Louis The histologic examination of the placenta as to the presence or absence of syphilitic changes corresponded to the established diagnosis in 95 5 per cent of the cases The lack of correspondence consisted entirely in finding no syphilitic changes in the placenta in cases in which the infant had syphilis In every instance in which the placenta was noted as showing syphilitic changes, the infant was found later to have syphilis The Wassermann reaction on the placental cord blood corresponded to the diagnosis in the infant in 96 5 per cent Here also the discrepancies were entirely due to finding a negative Wassermann reaction in the fetal blood when the infant was syphilitic In every instance in which the fetal blood gave a positive Wassermann reaction the infant was later found to have syphilis In 1,000 cases examined there was an incidence of 5 5 per cent among the poor of the white race, 16 per cent among negroes, and 10 per cent among the whole group of dispensary cases The incidence among the combined middle and upper classes was 1 5 per cent The total incidence in the whole series was 6 per cent

DISCUSSION

DR. HENRY J GERSTENBERGER, Cleveland Among 20 000 patients we found an incidence of syphilis of 14 per cent There was little difference in the incidence of syphilis as determined clinically alone and that since the Wassermann test has been employed

DR L R DE BUYS New Orleans The Wassermann test should be made on each infant no matter what the mother's reaction may be I have seen mothers negative from the Wassermann standpoint and in perfect health and yet their children were decidedly syphilitic and gave a positive Wassermann reaction I have also seen the mother give a negative Wassermann reaction, and one twin would be negative and the other positive

DR LANGLEY PORTER San Francisco In a small series of 118 cases we found that unless the blood was heated we had a good deal of trouble with the anticomplementary properties of the cord blood Of this number, 6 5 per cent were syphilitic

Lesions of the Midbrain

DR J H MASON KNOX Baltimore A child aged 3 years gradually developed bilateral ptosis, partial paralysis of the ocular muscles and a coarse tremor followed by ataxia These symptoms persisted for three months until the child died At necropsy a tuberculoma the size of a hickory nu was found in the midbrain, involving the corpora quadri gemina and occluding the aqueduct of Sylvius

(To be continued)

Current Medical Literature

Titles marked with an asterisk (*) are abstracted below

AMERICAN

American Journal of Physiology, Baltimore

May 1, 1920, 52, No. 1

*Gastric Response to Tea, Coffee and Cocoa in Normal Men. R. J. Miller, Hawk, Philadelphia.—p. 1.

*Influence of Tea, Coffee and Cocoa on Digestion. R. J. Miller, O. Bergeim, M. L. Rehfuss and P. B. Hawk, Philadelphia.—p. 28.

Psychic Secretion of Gastric Juice in Man. R. J. Miller, O. Bergeim, M. L. Rehfuss and P. B. Hawk, Philadelphia.—p. 54.

Influence of Tea, Coffee and Cocoa on Digestion and Protein Depletion and Curve of Regeneration. O. Bergeim, M. L. Rehfuss and P. B. Hawk, Philadelphia.—p. 72.

*Shock as Manifestation of Tissue Injury Following Rapid Blood Plasma Depletion and Protein Depletion. H. P. Smith, A. E. Belt and G. H. Whipple, San Francisco.—p. 72.

Rapid Blood Plasma Protein Depletion and Regeneration. H. P. Smith and G. H. Whipple, San Francisco.—p. 121.

*Factors Concerned in Perfusion of Living Organs and Tissues. A. E. Belt, H. P. Smith and G. H. Whipple, San Francisco.—p. 101.

Seasonal Variation in Growth of Boston School Children. W. T. Porter, Boston.—p. 121.

Certain Changes Noted in Ergographic Response as a Result of Tobacco Smoking. T. Raphael, Ann Arbor, Mich.—p. 132.

*Determination of Capillary Blood Pressure in Man with Microcapillary Tonometer. C. S. Danzer and D. R. Hooker, Baltimore.—p. 136.

*Plethysmographic Study of Shock and Stammering in a Trephined Stammerer. S. D. Robbins, Cambridge, Mass.—p. 168.

Chemical Constitution of Adenine Nucleotide and of Yeast Nucleic Acid. W. Jones, Baltimore.—p. 193.

Action of Boiled Pancreas Extract on Yeast Nucleic Acid. W. Jones, Baltimore.—p. 203.

Psychic Secretion of Gastric Juice.—The sight alone of a table well set with nourishing foods was found by Miller and his associates to give rise to a distinct secretion of gastric juice in normal men. Odor alone produced less stimulation than sight alone. The tasting and chewing of food in the absence of smell or sight produced no marked psychic secretion. The combined influence of the tasting, chewing and smelling of food was pronounced and much greater than that of smell alone. The sound and thought alone of a frying steak gave rise to a gastric secretion. The influence of smell with hearing produced little additional effect. Evil odors depressed secretion to the level of the continuous secretion. Foods unpleasantly prepared, or unpalatable in appearance, odor, taste and belief in their unwholesome character led to delayed acid response and evacuation. Newspaper reading during the course of a meal could not be shown to have any distinct influence on gastric digestion.

Gastric Response to Tea, Coffee and Cocoa.—A study was made by Miller and others of the influence of water, tea, coffee and cocoa on the gastric digestion of a uniform mixed meal as measured by the acid responses and evacuation times. Evacuation of the stomach was not appreciably delayed by the drinking of 1 liter of cold water, cold or hot tea, hot coffee, either plain or with cream or with cream and sugar. The addition of sugar alone to coffee delayed evacuation. Cocoa in 1 liter quantities markedly delayed evacuation. To a less extent this was true of half-liter volumes. One liter quantities of water hot or cold tea, hot coffee plain or with cream, delayed somewhat the rise of the level of intragastric acidity as compared with the basal meal alone. As high acidities and normal evacuation were, however, attained these beverages must have stimulated gastric secretion, been rapidly evacuated, or more probably both. Coffee with sugar alone delayed the development of gastric acidity. Coffee with sugar and cream had less effect. Cocoa delayed distinctly the development of intragastric acidity. One liter quantities of tea and coffee gave rise to marked acceleration of the heart beat to vasomotor relaxation, tremors and other nervous symptoms. Cocoa did not produce these effects but brought about a feeling of fulness at the stomach. Urine secretion during the first ninety minutes after tea or coffee ingestion varied from 550 to 866 c.c. after cocoa from 125 to 372 c.c.

Relation of Blood Proteins to Shock.—According to Whipple and his associates, a fatal shock reaction is almost constant following even a moderate plasma depletion preceded by liver injury. This would indicate that the liver cells are particularly concerned in the peculiar shock reaction which may follow plasmapheresis and lowering of the blood plasma protein values. It may be that this type of "shock" is not unlike the common "surgical shock." The evidence of these experiments gives strong support to the theory that in "shock," there is a primary cell injury which precedes the familiar clinical reaction.

Organ Perfusion.—The authors maintain that much of the work done with organ perfusion is of little value because a proper appreciation of the limitations of the method does not obtain among laboratory workers. The use of physiologic sodium chlorid solution, Locke's solution or various modified solutions with or without red blood corpuscles does not permit of physiological perfusion of organs. The contact of these salt solutions with the tissue cells will result in profound injury or actual cell destruction.

Effect of Tobacco on Ergographic Response.—On the basis of the results obtained in Raphael's study, it appears that under the influence of tobacco smoking, a distinct periodicity may be demonstrated in the curve of ergographic response, arising apparently as a result of central nervous system fatigue or depression.

Capillary Blood Pressure in Man.—A method for the study of capillary blood pressure is presented by Danzer and Hooker which differs from all of the previous methods in the criterion at which the readings are taken. It depends on the production of stagnation of the flow of corpuscles in the capillaries. With this method capillary pressure in man can be determined in the fingers and in the toes. The average capillary blood pressure in normal individuals was 22.2 mm. Hg. Cold lowers and heat raises capillary blood pressure. Posture was found to vary capillary pressure although the hand was at heart level at all time. It was lowest in the recumbent, highest in the standing and midway between in the sitting posture. The diurnal variation is very slight. Increased intrathoracic pressure raises capillary pressure. Diminished intrathoracic pressure lowers capillary pressure. Venous compression causes an increased capillary blood pressure. The authors believe that the prevalent conception that the redness of the skin is due to its capillaries and that pallor means capillary emptying is erroneous. While undoubtedly capillary contributing somewhat to the color of the skin, nevertheless the role of the capillaries is rather slight. The venous plexuses principally contribute to the color of the skin. The collapse of these plexuses is the principal cause of skin pallor resulting from compression. The authors propose as the name of their apparatus, the 'microcapillary tonometer.'

Stammering and Brain Volume.—Pronounced shock, fear of stammering and emotions of every kind always brought about increase in brain volume accompanied by increased size of pulse in Robbins' patient.

Annals of Surgery, New York

May 1920, 71, No. 5

*Finger Exploration of Gunshot Wounds of Brain. E. B. Towne and T. R. Goethals, Boston.—p. 531.

Craniocerebral Wounds Due to Projectiles. R. H. Fowler, Brooklyn.—p. 560.

*Foreign Bodies of Dental Origin in a Bronchus. Pulmonary Complication. C. A. Hedblom, Rochester, Minn.—p. 568.

Multiple Hemorrhage Foci In Bone. G. Barrie, New York.—p. 581.

*Compression Fractures of Lower End of Radius. J. H. Stevens, Boston.—p. 594.

Pseudomyxoma Peritonei. Report of Six Cases. M. H. Biggs, Ruther fordton, N. C.—p. 619.

Sarcoma of Stomach. J. Douglas, New York.—p. 628.

Hyperplastic Tuberculosis of Intestines. Report of Six Cases. S. Erdman, New York.—p. 637.

*Results Obtained in Treatment of Chronic Arthritis by Removal of Distant Focus of Infection. H. S. Chapman, San Francisco.—p. 643.

Injuries of Semilunar Cartilages of Knee Joint. M. S. Henderson, Rochester, Minn.—p. 658.

Use of Hyclorite and Modified Surgical Solution of Chlorinated Soda As Substitute for Original Dakin's Solution. E. P. Heller, Philadelphia.—p. 663.

Gastro Enterostomy Clamp Simplified and Improved. H. L. Foss, Danville, Pa.—p. 668.

Finger Exploration of Brain Wounds.—Of the 61 cases of head wounds discussed by Towne and Goethals 22 were scalp wounds, 11 were fractures, with intact dura, 28 patients had an open dura with brain wound. The 11 scalp wounds and 22 fractures with unopened dura brought out nothing of

interest The mortality in these cases is practically nil unless other wounds are fatal, as happened twice in this series This report is concerned with the 28 cases of wound of the brain of which 20 were operated and 8 were inoperable These patients were treated with the conception that the problem involved was the absolutely complete removal of contaminated damaged brain, blood clot, hair, cloth, bone and metal, so that primary suture might result in clean healing The method adopted was to suck and irrigate out the brain and clot and then extract with fine forceps bone and metallic fragments detected by a gentle palpating finger, provided the cavity was sufficiently large to admit the finger The size of the hole in the dura was not taken as an index, but was enlarged if necessary In some cases this finger technic, always (with one exception) preferred if possible, was contraindicated by the small size of the track in brain substance, or by the awkward situation of wounds caused by missiles passing in via the deep nasal sinuses, in these instances cleaning was done as well as possible with catheter and forceps Of the 28 cases 8 were considered inoperable and died without intervention in a few hours, 20 were operated, and of these, 7 died, giving a mortality of 35 per cent Of 13 evacuated cases, 12 healed by first intention, and the other developed a septic brain fungus, which was not fatal after a prolonged attempt to clean a cavity by the catheter forceps technic In only one instance did routine postoperative examination show a slight and temporary increase in the signs of brain injury Several cases are reported in which it seems highly improbable that the foreign bodies could have been removed without finger palpation Later results in the 13 evacuated cases for periods of from six to twenty-one months after operation show that there were no late abscesses, that six patients were working that major epilepsy developed twice, and that two only can be considered as not distinctly subnormal

Foreign Bodies of Dental Origin in Bronchus—There have been at the Mayo Clinic during the past four years seven cases of pulmonary suppuration following dental operations or trauma In two cases the tooth was spontaneously expelled, in one it was discharged through a thoracotomy wound, and in one it was found at postmortem In the other cases no foreign body was found, but it is quite probable that they were also cases of infection from inhalation Hedblom has collected forty-five proved cases from the literature These fifty-two cases form the basis of this report

Compression Fractures of Lower End of Radius—Stevens maintains that fractures of the lower end of the radius (so-called Colles) are always compression fractures, the compressive side breaking first, literally collapsing The first point of fracture is the point of greatest compression on the cortical surface of the bone because the stress increases both in compression and tension the further away from the neutral axis It breaks in compression because the compression is much greater than the tension Early reduction followed by early passive and active motion will return all or nearly all compressive fractures of the radius to useful light occupation within twenty days Any retentive apparatus other than a leather wrist strap after ten to twelve days is contraindicated except in a very rare instance

Sarcoma of Stomach—The total number of authenticated cases of sarcoma of the stomach now recorded, Douglas says, is 230 with a probably larger number on record, the reports of which are not available Of a total of ninety-two operative cases, sixty-nine were resections either of the exogastric tumor or of part of the stomach and twenty-three were either gastro-enterostomies or exploratory laparotomies Sarcoma of the stomach occurs in 1 per cent of all stomach tumors The average age of incidence is 41 6, in contrast with an average age of 61 2 for carcinoma Round cell and lymphosarcoma are the most frequent forms found They are more apt to be infiltrating, but the round cell may project into the stomach or form pedunculated tumors They result in ulceration oftener than in other sarcomata but not as frequently as in carcinoma Spindle cell and myosarcoma are apt to form large exogastric tumors The diagnosis can rarely be made with certainty, the roentgen-ray examination furnishes the most useful evidence

Treatment of Chronic Arthritis—Fifty per cent of the cases of chronic arthritis treated at the Stanford University clinics by the removal of foci of infection showed definite improvement The most striking results were obtained in those cases in which the focus was situated in the genito-urinary tract Very rapid recovery with very few treatments were obtained in those cases in which the teeth were the seat of infection Removal of the tonsils in several cases was followed in a few days by loss of pain, and later by return of function to the injured joint

Archives of Ophthalmology, New York

May 1920 **49** No 3

Ring Magnet T Harrison Butler Birmingham England—p 247
*Radium and Roentgen Ray in Tumors of Hypophysis D Quick New York—p 256
*Nonsurgical Treatment of Pituitary Disorders W Timme New York—p 268
Capsule in Cataract Extraction E Jackson Denver—p 275
Initial Developmetnt of Papillary Bodies in Human Conjunctiva K Hiwatari Kagoshima Japan—p 283
Atypical Case of Coats's Disease of Retina L W Crigler New York—p 287
Etiology and Diagnosis of Glaucoma and Control of Disease by Miotics W C Posey Philadelphia—p 293
Tonometry of Glaucoma W McLean New York—p 301
Visual Fields in Glaucoma L C Peter Philadelphia—p 309
Operative Treatment of Glaucoma J E Weeks New York—p 316

Radium in Pituitary Disease—In Quick's opinion the application of radium in hypophyseal tumors offers the best chance for an accurate approximation of a well selected dosage with a minimum risk to the patient He reports three cases

Nonsurgical Treatment of Pituitary Disease—In cases of underactivity presumably of the anterior lobe, Timme advises feeding of the whole gland in doses of from ½ grain as infrequently as once or twice a week, up to 1 or even 2 grains three times daily, depending on the reaction of the patient to the dose especially as regards the production of headache excitability insomnia, nausea and vomiting, and rapid fatigability But in addition thereto, either feeding of the anterior lobe or hypodermic injections of the anterior lobe extract will often be found of value especially in the Froelich syndrome with genital lack of development and in low bodily temperatures Very small doses of thyroid gland, 1/100 to 1/10 grain every day or on alternate days will frequently enhance the effect of the pituitary administration In cases of overactivity, treatment depends on the cause for overactivity If this cannot be found and eliminated, then give sedatives such as luminal ½ grain, once or twice a day, for a few days at a time, pilocarpin, 1/10 grain, or acetanilid 2 grains, several times daily, as alternates If disturbances in the genital sphere produce secondary pituitary activity lutein or ovarian extract will be found of benefit When the activity is secondary to a thyroidectomy, then small doses of thyroid gland will relieve the symptoms In too early thymic involution, with pituitary overactivity thymus gland 1 to 5 grains, several times daily is often effective Occasionally, an inefficient chromaffin system will give rise to overactivity on the part of the pituitary which may be offset by feeding whole gland suprarenal extract

California State Journal of Medicine, San Francisco

June 1920 **18**, No 6

Roentgen Ray in Diagnosis of Nontubercular Pulmonary Conditions L Bryan San Francisco—p 219
Malingering Relation to Doctor J Catton San Francisco—p 220
New Form of Weight Chart for Infants H K Faber San Francisco—p 225

Journal of Biological Chemistry, Baltimore

May 1920 **42**, No 1

*Proteins of Green Leaves 1 Spinach Leaves T S Osborne A J Wakeman C S Leavenworth and O L Nolan New Haven Conn—p 1
*Digestibility of Raw Corn Potato and Wheat Starches C F Langworthy and H J Deuel Jr Washington D C—p 27
*Carbon Dioxid Content as a Basis for Distinguishing Heated from Unheated Milk L S Van Slyke and R F Keeler Geneva, N Y—p 41
*Distribution of Iodin between Cells and Colloid in Thyroid Gland I Methods and Results of Study of Beef Sheep and Pig Thyroid Glands A L Tatum Chicago—p 47

Elimination of Taurine Administered to Man C L A Schmidt and E G Allen Berkeley Calif—p 55

*Some Proteins from Georgia Velvet Bean Stizolobium Deeringianum C O Johns and H C Waterman Washington, D C—p 59

Experimental Studies on Growth Growth of Relatively Long Lived Compared with that of Relatively Short Lived Animals T B Robertson and L A Ray Toronto—p 71

Colorimetric Estimations with Solutions Containing Two Colored Substances A G Falk and H M Noyes New York—p 109

*Fat Soluble Vitamin VI In Carrots Alfalfa and Yellow Corn H Steenbock P W Boutwell M T Sell and I G Gross, Madison Wis—p 131

Separation of Physiologically Active Portion of Posterior Lobe of Pituitary Body I Fenger and M Hull Chicago—p 153

Utilization of Salep Mannan M S Rose New York—p 159

*At What Level Do Milk Proteins Become Effective Supplements to Proteins of Cereal Grain? E B Hart and H Steenbock Madison Wis—p 167

Fermentation Characteristics of Certain Pentose Destroying Bacteria E B Fred W H Peterson and A Davenport Madison Wis—p 175

Photometric Turbidimeter W G Bowers and J Moyer University N D—p 191

Chemical Isolation of Antineuritic Vitamins C N Myers and C Voegtlin Washington D C—p 199

Osmotic Pressure of Serum and Erythrocytes in Various Vertebrate Types as Determined by Cryoscopic Method J B Collip Edmonton Can—p 207

Effect of Dilution on Osmotic Pressure and Electrical Conductivity of Whole Blood Blood Serum and Corpuscles J B Collip—p 213

Osmotic Pressure of Tissue Determined by Cryoscopy J B Collip—p 221

Maintenance of Osmotic Pressure in Nucleus J B Collip—p 227

Proteins in Dry Spinach Leaves—The authors show that spinach leaves dried at a low temperature and extracted with ether, alcohol, water, and alkaline solutions yield results so similar to those obtained with the fresh green leaf that evidently the constituents of the cells are altered to only a slight degree by drying

Digestibility of Raw Corn, Potato and Wheat Starches—Raw corn and wheat starches were found by Langworthh and Deuel to be completely assimilated and no trace of them could be found in the feces Seven experiments on raw potato starch gave values for its digestibility varying from 62.3 to 95.2 per cent, the average was 78.2 per cent The ingestion of the potato starch caused disagreeable physiological disturbances not noted in the other experiments with raw corn and wheat starches The digestibility of the other constituents of the diet was not affected to any great extent by the large amounts of raw starch ingested

Carbon Dioxid Content of Heated and Unheated Milk—It appears that under the conditions to which normal unheated milk is subjected in its handling from the time of milking to the time of delivery to the consumer, the volume percentage of carbon dioxid rarely, if ever, drops below 3 and seldom below 3.5 while the subjection of normal milk to the conditions of heating used in pasteurization reduces the percentage of carbon dioxid by volume to 2.5 or less Therefore it appears safe in general, to assume that milk containing less than 3 per cent of carbon dioxid by volume has been heated to the temperature of pasteurization

Iodin in Thyroid—A new method is described by Tatum for the separation of cells from colloid of the thyroid gland for chemical study Iodin is found in both cells and colloid of beef sheep and pig thyroid glands The ratio of percentages of iodin in cells to iodin in whole glands appears to be relatively constant for pig sheep and beef thyroid glands even though such glands vary both in morphology and in total iodin content

Proteins in Georgia Velvet Bean—The Georgia velvet bean contains 23.6 per cent of protein ($N \times 6.25$) Two globulins designated as the a and b-globulins may be separated in yields of about 3 and 1.25 per cent respectively, and an albumin is found in extracts which have been freed from globulin by repeated dialysis Analyses of the three proteins show marked differences in the nitrogen and sulphur content and in the distribution of nitrogen as determined by Van Slyke's method Qualitative examination indicates that the B-globulin contains no tryptophan an observation of particular interest in view of the fact that this amino-acid has been found to be present in all seed globulins heretofore tested The a-globulin and the albumin from the Georgia velvet bean both contain tryptophan

Studies on Growth—The hypothesis is presented by Robertson and Ray that the potential longevity of any given individual is determined by the relative velocities of anabolism in the cellular and sclerous tissues, respectively In terms of this hypothesis it is suggested that the prolongation of life which is brought about by continuous administration of tethelin to mice is attributable to an increased velocity of anabolism of distinctively cellular elements to the relative disadvantage, in the competition for nutrients of the connective tissue elements If the administration of tethelin is discontinued prior to sexual maturity the normal proportion of cellular to connective tissues is rapidly restored and exceptionally large animals of normal or abbreviated duration of life are the result

Fat Soluble Vitamin in Carrots—When carrots are saturated with lard or corn oil and then extracted with ether none or little of the fat-soluble vitamin is removed The lard preparation gave no evidence of containing the vitamin but the corn oil preparation contained it in small but persistent amounts Ether has little solvent properties for the fat-soluble vitamin as found in carrots, chloroform and carbon disulphid remove some of it, while alcohol and benzene remove considerable amounts of it None is entirely satisfactory for extraction purposes

Uterus Contracting Principle in Posterior Lobe of Pituitary—Evidence is furnished by Fenger and Hull which indicates that the uterus contracting active principle of the posterior lobe of the pituitary body does not occur in the fresh gland in free or crystalline form, but is linked to or part of some protein complex In its original protein association the uterine stimulus is insoluble in ether, petroleum ether chloroform and practically insoluble in absolute alcohol It is sparingly soluble in 95 per cent alcohol but yields a highly active split product when treated with hot 95 per cent alcohol The split product is amorphous in nature very hygroscopic and much more sensitive to desiccation than the original basic material from which it was derived The crystalline bodies naturally occurring in and isolated from the posterior lobe are inorganic salts possessing no uterus-contracting power Alkaloidal reagents only incompletely precipitate the active fraction of the water extract of the gland

Milk Proteins as Supplement to Cereal Proteins—The results obtained by Hart and Steenbock show that highly efficient protein mixture is not obtained until the proportion of liquid milk to corn meal reaches 1 1, in this proportion the milk nitrogen will constitute approximately 30 per cent of the total nitrogen of the ration

Journal of Experimental Medicine, Baltimore

May 1 1920 **31** No 5

*Experimental Pneumonia III Spontaneous Pneumonia in Monkeys F G Blake and R L Cecil Washington D C—p 499

*Id IV Results for Prophylactic Vaccination against Pneumococcus Pneumonia in Monkeys R L Cecil and F G Blake Washington D C—p 519

*Experimental Studies in Diabetes Series I Production and Control of Diabetes in the Dog 3 Effects of Protein Diets F M Allen New York—p 555

Id 4 Control of Experimental Diabetes by Fasting and Total Dietary Restriction F M Allen New York—p 575

*Id 5 Various Failures of Dietetic Treatment and Their Causes F M Allen New York—p 587

Relation of Portal Blood to Liver Maintenance Demonstration of Liver Atrophy Conditional on Compensation P Rous and L D Larimore New York—p 609

Epidemiology of Blackhead in Turkeys Under Approximately Natural Conditions T Smith and W H Graybill Princeton N J—p 633

Production of Fatal Blackhead in Turkeys by Feeding Embryonated Eggs of Heterakis Papillosa H W Graybill and T Smith Princeton N J—p 647

Spontaneous Pneumonia—The close analogy between the epidemic of lobar pneumonia that occurred among monkeys at the Army Medical School and similar epidemics of lobar pneumonia that occurred during the war among certain groups of newly drafted troops shortly after their arrival at camp Blake and Cecil believe indicates that pneumococcus pneumonia may become an epidemic disease among groups of susceptible individuals when they are assembled under conditions that facilitate the ready transfer of infection from

the individual to individual Bacteriologic examination made by Blake and Cecil showed the spontaneous pneumonia to be due in the great majority of cases to infection with pneumococcus Type IV Immunologic classification of the strains of pneumococci by cross-agglutination tests showed that the majority fell into two biologic groups Two cases were apparently caused by *Streptococcus haemolyticus* two by *Streptococcus viridans* Study of the pathology of spontaneous pneumococcus pneumonia in monkeys showed that it presented the characteristic picture of lobar pneumonia, both macroscopically and microscopically, and was in all respects comparable with the pathology of lobar pneumonia, experimentally produced in monkeys and with lobar pneumonia in man

Prophylactic Vaccination Against Pneumonia—Cecil and Blake found that the subcutaneous inoculation of monkeys with pneumococcus Type I vaccine in doses comparable with those employed in man does not protect them against subsequent attacks of pneumococcus Type I pneumonia, either spontaneous or experimental Furthermore, the occurrence of pneumococcus Type IV pneumonia among monkeys that have been vaccinated with pneumococcus Type I lipovaccine indicates that the vaccinated animals develop no cross protection against other types of pneumonia Vaccination doses, however, modify the course of the disease Invasion of the blood stream by the pneumococcus in vaccinated animals is usually slight and the proportion of recoveries is considerably higher for vaccinated than for unvaccinated monkeys Pneumococcus saline vaccine produces a greater amount of protective substance in the serum of the vaccinated animal than does pneumococcus lipovaccine and is probably, therefore, a better antigen Both, however, fail to protect the animal against pneumococcus pneumonia

Effects of Protein on Diabetes—No specific differences were observed by Allen between the glycosuric effects of different kinds of protein Other incidental observations were noted in connection with the records of individual animals General conclusions are deferred to the close of the series

Failures of Dietetic Treatment of Diabetes—Practically every detail of clinical diabetes was reproduced by Allen in partially depancreatized animals Every detail of the downward progress of human patients on various diets in reproduced in such animals Varying degrees of success and failure in the dietetic control of diabetes are also illustrated A claim of saving every patient no matter how near death, Allen says would be a preposterous one for any remedy in any disease, and the animal experiments do not support such a claim for diabetes Also it is unreasonable to expect the actual care of an organic deficiency by diet, and the diet treatment in animals just as in patients generally represents the sparing rather than the restoration of the weakened function The basis of the belief is the inherently progressive tendency of severe cases of clinical diabetes is shaken by the exact reproduction of such case histories by diet in animals which are free from spontaneous downward tendencies, but there is still lack of a sufficient number of patients treated on the principle of relief of the total metabolic burden to demonstrate the absence of such inherent progressiveness in human diabetes

Journal of Laboratory and Clinical Medicine, St Louis

May 1920 **5**, No 8

Action of Ethylenediamine H G Barbour and A M Hjort New Haven Conn—p 477
Chemical Changes in Blood in Disease. Uric Acid V C Myers New York—p 490
*Bacteriologic Data on Epidemiology of Respiratory Diseases in Army H J Nichols Washington D C—p 502
Chronic Poisoning from Hydrocyanic Acid C I Reed Lawrence Kan—p 512
Indicanuria and Acetonuria of Gastrointestinal Origin E R Wilson Los Angeles—p 515
Arsphenamin and Neoarsphenamin W A Smith Springfield Ill—p 518
Primary Cancer of Liver I M Cohn Spokane Wash—p 528
Effect of Tobacco on Vascular Wall Tsang G Ni China—p 534
Selection of Kieselguhr for Filtration of Serums G E Ewe Philadelphia—p 538
Convenient Stopcock Needle Cannula P J Hanzlik Cleveland—p 540
New Urinometer J Rosenbloom Pittsburgh—p 542

Epidemiology of Respiratory Diseases—Nichols supports the inhalation theory of the transmission of respiratory diseases No evidence was found by him to support the theory that these organisms spread through dish water Dish water showed no streptococci except when no soap was used Infection of the mouth did not occur when streptococci were smeared on the lips Soapy dish water is antiseptic for streptococci if of proper reaction and made with proper soap Evidence was found however, that intestinal organisms can spread through dish water

Journal of Pharmacology and Experimental Therapeutics, Baltimore

May 1920 **15**, No 3

*Reaction of Cat's Uterus to Strophanthus and Calcium F Ransom London—p 181
*Point of Attack of Certain Drugs Acting on Periphery I Action on Bladder C W Edmunds and G B Roth Ann Arbor Mich—p 189
*Id II Action on Retractor Penis Muscle of Dog C W Edmunds Ann Arbor Mich—p 201
Influence of Heavy Metals on Isolated Frog Heart W Salant and H Connet—p 217

Reaction of Uterus to Strophanthus and Calcium—The investigations made by Ransom show that the movements of the excised cat's uterus which have been diminished or arrested by placing it in a Ringer's fluid containing no calcium, are restored and usually increased by the addition of strophanthus The effect of quite a short exposure of uterine muscle to strophanthus is to make it extraordinarily responsive to calcium It is suggested that some forms of postpartum hemorrhage may be due to subsistence on a diet poor in calcium affecting the efficiency of the uterine muscle, and that in such cases strophanthin might usefully be injected intravenously

Point of Attack of Epinephrin, Nicotin, etc—The point of action of a number of drugs can be defined pretty accurately epinephrin produces its effects by an action on the myoneural junctions of the true sympathetic nerves and nicotin probably produces its effects on the bladder by an action on the ganglia along the course of the nerves going to the organ although this is not certain, as the experiments described by Edmunds and Roth show that there is, in addition to the action on the ganglia also a direct effect on the muscle Morphin and probably the pilocarpin-atropin series, including curara act along the course of the parasympathetics at a point about which there is still discussion as to whether it is nerve end or myoneural junction Or, it may be that the contractile substance proper is affected and the points of attack may not be the same in all organs and localities

Action of Pilocarpin, etc, on Retractor Penis—The action of pilocarpin physostigmin atropin and nicotin on the retractor penis muscle of the dog is a direct one on the muscle proper and there is nothing to indicate that the same may not hold good for their action on the bladder with the possible exception of nicotin which may also act on the ganglia along the course of the nerves going to that organ In the case of other organs and structures such as the iris bronchial muscles uterus etc, the same general rule will not hold as the action may be one on nerve endings or on myoneural junctions or on the muscle substance proper It is, therefore, dangerous to speak of these alkaloids as being stimulants of the parasympathetic nerve endings' or of the "myoneural junctions'

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Journal of Surgery, Bristol

April 1920 **7**, No 28

*Traumatic Aneurysm of Right Subclavian Artery Treated by Ligature J McClure—p 438
Surgery of Chest in Relation to Retained Projectiles B Moynihan—p 444
*Histologic Re emblances of C adam—p 487
*Intu susception Occurring —p 490

Difficulties in Diagnosis of Nerve Function M Lorrie ter Brown —p 495
Operation for Chronic Dislocation of Peroneal Tendons R E Kelly —p 502
Crucial Ligaments of Knee Joint Function Rupture and Operative Treatment E W Hey Groves —p 505
Treatment of Trigeminal Neuralgia by Injection of Alcohol into Gasserian Ganglion H H Rayner —p 516
*Cyst of Common Bile Duct A A McConnell —p 520
*Hemorrhage and Postoperative Obstruction in Suprapubic Prostatectomy J W T Walker —p 525
*Thigh Rotation or Obturator Test New Sign in Some Inflammatory Abdominal Conditions V Z Cope —p 537
Case of Extensive Keloid of Ear Lobes R Morton —p 538
Abdominothoracic Gunshot Wound Diaphragmatic Hernia of Stomach S Barling —p 539
Retroperitoneal Hematoma after Radical Cure of Inguinal Hernia and Varicocele C H Fagge —p 542
Unusual Wound of Abdomen J B Haycraft —p 543
Two Cases of Strangulated Intestine Partly Contained in Hernial Sacs H Clutty —p 545
*Uncommon Injury of Carpus C P G Wakeley —p 546

Traumatic Aneurysm of Subclavian Artery—A case of traumatic aneurysm of the subclavian artery associated with a concurrent brachial monoplegia was treated by ligature of the first portion of the subclavian trunk and vertebral artery. Relief from great suffering and pain followed the application of the ligature. The patient's general condition improved rapidly, and active motion in the shoulder became normal.

Surgery of Chest—Forty-nine patients have been treated by Moynihan by operation. Two patients died, one from hemorrhage following the removal of a projectile from the root of the lung and one from sepsis after the removal of an infected foreign body and a piece of clothing. Twenty-four patients are in perfect health and are able to do heavy work. Fourteen are better than before operation but still have some shortness of breath, or unusual respiratory trouble when having a cold or in bad weather. Two patients died, three are unable to do any work or have serious respiratory trouble, shortness of breath, cough etc. All but five patients were operated on by the ordinary anterior method. The five operated on by direct attack from behind show four with good ultimate results, one with fair result. Eighteen of the foreign bodies were examined bacteriologically, eleven were infected with *Staphylococcus aureus* or *Streptococcus brevis* in equal numbers or by these organisms together with coli form bacilli; seven were sterile. Empyema after operation developed in five cases, and in each of these, when the foreign body was examined it was found to be infected. Of the seven which did not suppurate only once was the foreign body examined, and it was sterile.

Oriental Sore Resembles Epithelioma—The excised skin lesions of the type of Oriental sore sometimes called Baghdad boil, Delhi sore, etc., examined by Macadam mostly showed the characters of a chronic ulcer, those of greater chronicity having some epithelial downgrowth at the margin, but in two instances the histologic characters were such as to be practically indistinguishable from a squamous celled carcinoma.

Intussusception During Typhoid—The temperature of the patient whose case is cited by Moreton had been raised although not typical but rather of the remittent type until the forty-seventh day of the disease. On that morning the temperature fell suddenly to 97.8 F. and the patient had a severe attack of vomiting. Although the signs characteristic of perforation were absent it seemed the most probable cause of her condition notwithstanding. Other possibilities were that the case was one in which a slow leakage had taken place and the leak had been shut off by adhesions, or that it was a case of localized peritonitis without macroscopic perforation. The abdomen was opened a mass was felt in the ileocecal region. This was found to be an enteric intussusception which had become enterocolic. Its apex was at a point of the ileum 5 inches from the ileocecal valve. This had become invaginated into and had extended 4 inches up the lumen of, the ascending colon. The ileocecal valve was not invaginated so that the intussusception was of the sub division iliaca-ileo-colica.' The intussusception was reduced without difficulty. No perforation was found. The patient lived. Ten other cases of this condition are mentioned in the literature.

Cyst of Common Bile Duct—Only thirty-five cases of this condition have been reported. The diagnosis has never been made before operation and the operative treatment has not yielded good results. In McConnell's case, the cyst extended from the extreme right side of the abdomen to a point some distance to the left of the middle line, and lay between the portæ, vena cava and right kidney behind, and the pancreas and duodenum in front. The cyst was aspirated. About one year later some leakage of bile took place at the original site of drainage. The original wound was opened and a large quantity of pus, mixed with bile, evacuated. Eighteen months later a third operation was performed. The cyst had shrunk to the size of a walnut, and occupied a position between the second stage of the duodenum and the right kidney. The patient made an uneventful recovery.

Avoiding Hemorrhage and Obstruction After Prostatectomy—In Walker's opinion prevention of these two complications lies in performing an open operation in which the bladder and prostatic cavity are fully exposed, the hemorrhage is treated, and all nodules and strips of tissue and valves are removed. The operation is described in detail.

Thigh Rotation or Obturator Test for Appendicitis—Cope says a diagnosis of appendicitis may be facilitated by bringing the obturator internus muscle into action, thus pain may be caused by the dragging of the contiguous inflamed tissues. The test is elicited as follows. The right thigh is slightly flexed (so as to relax the psoas muscle), the limb is then fully rotated at the hip first internally and then externally so as to put the obturator internus through a full range of movement. The sign is positive if the patient complains of hypogastric pain when the limb is moved in this manner.

Injury of Carpus—Wakeley's patient was thrown from his motorcycle and landed on his outstretched righ hand. He sustained a fracture of the styloid process of the radius, a fracture through the neck of the os magnum, dislocation of the scaphoid inward and dislocation of the semilunar forward with rotation on its transverse axis.

British Medical Journal, London

May 29, 1920, 1, No. 3100

Toxemias of Pregnancy A W Bourne —p 727
*Collective Investigation of Ten Thousand Recruits with Doubtful Heart Conditions C C Gibre and others —p 730
Immediate Closure of Empyemas F Hathaway —p 734

Causes of Valvular Heart Disease—Taking aortic regurgitation and mitral stenosis as the two typical valvular lesions which can be diagnosed with comparative certainty during life the results of this statistical inquiry have led to the following conclusions. The most important etiologic factor in the production of organic lesions of the heart valves in men between the ages of 18 and 41 is rheumatic fever. Strain can independently produce aortic regurgitation. While strain may be a cause of mitral stenosis it is a much less important factor than in the production of aortic regurgitation. There is a third agent giving rise to symptoms simulating influenza, which is an efficient cause of mitral stenosis and can possibly affect the aortic valves as well but is not nearly so likely to do so. The authors have been unable to find any statistical evidence that syphilis, scarlet fever, diphtheria, pneumonia or gonorrhea are causes of valvular lesions nor can we find statistical evidence that a history of growing pains points to affections productive of valvular lesions. The same may be said with slight reservations, of a history of rheumatism where there is no clear account of pain, swelling of the joints, fever, or confinement to bed. The evidence in favor of chorea as an efficient cause of mitral stenosis is strong, and some though not very striking evidence in confirmation of the view that chorea and rheumatic fever are both manifestations of the activity of a common cause has been found.

Glasgow Medical Journal

May 1920, 11, No. 5

Penetrating Gunshot Wounds of Chest R F Young —p 193
Fatality of Peptic Ulcer and Importance of Early Diagnosis J Carslaw and J M Cowan —p 211

Japan Medical World, Tokyo

May 1 1920 **10** No 18

Antirabic Treatment of the Dog S Umeno and R Doi
Vital Staining, Stain Granules in Cells K Kiyono and H Hoshijima

May 8 1920 **10,** No 19

Vital Staining Stain Granules in Cells K Kiyono and H Hoshijima
First Intermediate Host of Paragonimus Westermanii A Ando

May 15 1920 **10,** No 20

First Intermediate Host of Paragonimus Westermanii A Ando
Early Diagnosis of Gastric Cancer H Tsuzi

May 22 1920 **10** No 21

Early Diagnosis of Gastric Cancer K Tsyzi
Route in Host's Body Taken by Schistosoma Japica Y Suyeyasu
Therapy of Liver Distomiasis S Kakehi K Maekawa and G Toide

Lancet, London

June 5 1920 **1,** No 5049

Principles of Medical Science as Applied to Military Aviation J L Birley—p 1205
*Vital Capacity Constants Applied to Study of Pulmonary Tuberculosis G Dreyer and L S T Burrell—p 1212
Blood Transfusion Its Theory and Practice G Keynes—p 1216
*Effects of Occupation and Race on Health of Recruits G R Hall—p 1218
*Actinomycosis of Cecum Report of Case E G Slesinger—p 1220
*Case of Paratyphoid 'C' Fever in East Africa R P Garrow—p 1221
Psychoanalysis and Psychotherapy J Crichton Browne—p 1248

Vital Capacity Constants in Pulmonary Tuberculosis—A definite decrease in vital capacity as compared with what should be normal for any person, taking into account the class in which this person should be placed according to occupation and mode of life, Dreyer and Burrell claim is characteristic of pulmonary tuberculosis An improvement in the clinical condition of the patient is found to be accompanied by an increased vital capacity while an advance of the disease results in a decrease in vital capacity The vital capacity, therefore, gives a valuable quantitative measure of the benefit, if any, which the patient receives as a result of treatment The determination of the vital capacity is also useful for the classification of cases of pulmonary tuberculosis, because it is possible by this means numerically to express the injury to health (e g degree of toxemia) which otherwise would depend on the individual interpretation of physical signs by different observers In this connection it should be noted that classification by physical signs alone may place a patient nearing death from an acute lesion in a high category, while another patient, with satisfactory fibrosis and extensive cavitation, likely to live for several years, may be placed in the lowest category As an aid to diagnosis a single or repeated examination of the vital capacity of doubtful cases will also prove useful

Effect of Occupation and Race on Heart Disease—An analysis of 2,500 heart cases was made by Hall Of these 40 per cent had what is known as heart disease that is V D H (valvular disease of heart) or excessive myocardial change The illness of 50 per cent was due to want of tone and minor causes, nearly all quite curable if the people concerned had been in a good financial position In other words many of these will drift into invalidism and national inefficiency for want of a fair chance Another interesting feature is the proportion of dark to fair people who figure in this list Of the 2 500 heart cases the proportion of dark to fair was 3 to 2, and since among the other recruits examined there were two fair to every one dark heart trouble would appear to be three times as common among the dark elements As regards hyperthyroid action, the dark are affected in the proportion of ten to one The surprisingly high categories in which clerks were placed shows that this occupation need not be unhealthy, while the absolute ill health of the Russian Jews, as a whole and the close approximation of Jewish lads of 18 born abroad, but reared in Britain, to the British standard at the same age, proves there is nothing radically wrong with the physique of the Jewish race

Actinomycosis of Cecum—The case reported by Slesinger is unusual on account of the localized nature of the lesion and the onset with generalized peritonitis

Paratyphoid C—An organism corresponding in every way with Hirschfeld's organism was isolated by hemoculture in a case of continued fever in the course of routine blood culture for the diagnosis of puzzling pyrexias This was the only case of paratyphoid C found—a sporadic case, thus differing from cases found elsewhere

Medical Journal of Australia, Sydney

May 1 1920 **1,** No 18

Conservative Treatment of Eclampsia R M Allan—p 405
Rodent Ulcers and Allied Growths J B Cleland and N Paul—p 407

May 8 1920 **1,** No 19

Labyrinthine Complications in Middle Ear Suppurations H J Marks—p 429
Blood Transfusion J J Power—p 440

National Medical Journal of China, Shanghai

March 1920 **6,** No 1

Management of 1919 Cholera Epidemic in Harbin Wu Lien Teh and J W H Chun—p 4
*Incidence of Abdominal Disease in Chinese J Heng Liu—p 17
*Pathogenicity of Ascaris Lumbricoides Report of Cases E S Tyau—p 21
Selection of Men for Aviation Service H J Howard—p 29
Use of Boiled Beef Bone as Transplants in Tuberculosis of Spine and as Internal Splints in Reduction of Fractures Way Sung New—p 36
Nutritive Value of Soy Bean Products W H Adolph and P C Kiang—p 40
Etiology of Last Cholera Epidemic E T H Tsen—p 49

Abdominal Disease in Chinese—The average Chinese hospital, supposing it has the same bed capacity as the Massachusetts General Hospital, admits only one sixth as many abdominal cases, and sees less than one fifth as many laparotomies Appendicitis is a common disease among the Chinese In fact, excepting hernia, it is the most common abdominal condition which comes to the hospitals for treatment Liver cirrhosis and splenomegaly of various and often indeterminate etiology compose 17 per cent of all the abdominal cases seen in the Chinese hospitals

Ascaris Lumbricoides in Bile Passages—Tyau reports the case of a man admitted to the hospital complaining of pain in the epigastrium and general debility The pain began about three months before, and slowly got worse and worse It was a dull pain, occurring usually in the afternoon and after meals and lasting about three hours It was felt chiefly in the epigastrium and occasionally over the hepatic region, it did not radiate to the back or shoulder During the attack of pain nothing could be taken into the stomach The appetite was poor and the bowels irregular A nodular swelling about the size of an egg was palpable below the right costal margin which was slightly tender on deep palpation Laboratory findings Urine negative, gastric analysis showed hypochlorhydria, blood secondary anemia, feces showed many ova of ascaris and a few of trichuris After a course of santonin treatment about eighteen worms were passed with the feces But the patient did not improve There was no fever The patient died five days after the santonin treatment At the necropsy the liver was found to be much enlarged on the lateral and posterior aspects The gallbladder was greatly distended and the cystic duct was blocked by nine ascaris worms The liver contained numerous abscesses with copious pus, and in the bile ducts were embedded a number of young ascaris worms, some measuring only 1 25 inches long In the intestine fifteen ascaris worms all female and one trichuris was found Numerous eggs were found in the gallbladder and the liver Sections of the liver showed marked fibrosis with deposits of biliary pigments and degeneration of the cells

South African Medical Record, Cape Town

April 24 1920 **18,** No 8

Continuous Administration of Nitrous Oxid in Dental Surgery W A Rail—p 144
Tic Douloureux A M Moll—p 147

May 8 1920 **18** No 9

Extragenital Chancres B Bernstein—p 163
Epidemic Influenza P T Cairns—p 165
Tympanic Membrane Correct Form and Reflecting Areas J L Aymard—p 167
*Specific Complement Fixation Test for Bilharziasis W A Murray—p 168
*Ruptured Ectopic Gestation Combined with Pregnancy in Utero C C Elliott—p 169

Complement Fixation Test for Bilharziasis—The technic employed by Murray is based on a modification of the original Wassermann test, and the results have been satisfactory, although the number of tests actually performed has been small. Antigen obtained from the livers of snails (*Physopsis africana*) infected with the cercariae of *Schistosomo haematobium* was used. The livers are ground up in alcohol (1 gm. liver substance to 10 c.c. alcohol), the mixture is kept at room temperature for five days, with frequent shaking, is then filtered, and the alcoholic extract is used as antigen. For the test the antigen is mixed with 1 per cent. cholesterin (3 2), and is then titrated. The three antigens used so far have each given an anticomplementary titer of 1 3, and an antigenic titer of 1 80. A dilution of 1 8 is used in the actual test. The amboceptor, complement and sheep cells are used exactly as in the Wassermann test. Murray says that the presence or absence of bilharzial disease may be diagnosed with accuracy from the blood serum of any patient.

Simultaneous Ectopic and Uterine Pregnancy—In the case cited by C. C. Elliott, an attack of sudden severe abdominal pain led to the diagnosis of ruptured ulcer of the stomach. The woman was having her usual menstrual flow, and gave no history of missing a period. Elliott operated and found the right fallopian tube near its outer third, ruptured in what was an early pregnancy, possibly a month or six weeks. The uterus was somewhat enlarged, but Elliott did not consider this abnormal. The operation was done April 26, 1919. December 9 she gave birth to a full term child. Elliott concludes that there must, of course, have been a twin pregnancy—one fetus extra-uterine and one intra-uterine. The pregnancy probably began early in March.

Bulletin de l'Academie de Medecine, Paris

May 18, 1920, 83, No. 20

*Precancerous Condition. G. Darier.—p. 464
Lethargic Encephalitis. L. Bernard and others.—pp. 470, 474

Precancerous Condition.—Darier refers to the chronic atypical epithelial proliferation described by Bowen and urges that all the patches should be thoroughly excised as cancer is almost certain to develop in them. This dermatosis resembles in many respects Paget's disease of the nipple which likewise, is usually followed by cancer. The dystrophy or dyskeratosis closely resembles epithelial masses in the cancers, which should be borne in mind in cancer research.

May 25, 1920, 83, No. 21

*Resection of Posterior Arc of First Ribs. J. Boeckel.—p. 486
Spring Girdle for Ptosis. De la Prade.—p. 489
*Ipecac for Infants' Dyspepsia. Rousseau Saint Philippe.—p. 491
Influence of Liver on Sero-Agglutination. Duhamel and Thieulin.—p. 492

Resection of Posterior Arc of First Ribs.—Boeckel for twenty years has operated on high empyema from the back by severing the rhomboideus and the serratus magnus through a longitudinal incision in the trapezius, the incision in the skin curving around the posterior margin of the scapula. When these muscles are severed the scapula can be easily pushed over toward the axilla, giving ample access to the posterior arc of the upper five ribs.

Ipecac for Infants' Digestive Disturbances.—Saint-Philippe gives systematically minute doses of tincture of ipecac to bottle-fed babies with digestive disturbances. He gives it by drops in progressive doses, aiming to act on the digestive juices, and on fermentation and putrefaction. The ipecac, he says, tones up the liver and secretion of bile.

Bulletin Medical, Paris

May 12, 1920, 34, No. 25

Forms of Insufficiency of Aortic Valve. C. Achard.—p. 435
*Erosions of the Anus. G. Durand.—p. 436
*Insufficiency of the Kidneys. J. Génévrier.—p. 438

May 19, 1920, 34, No. 26

Bronchitis of Nasal Origin. H. Flurin.—p. 455

Hemorrhagic Erosions in the Anal Canal.—Durand comments on the difficulty of diagnosing these erosions, which may be the source of severe hemorrhage and yet escape inspection, hidden in crevices, unless the proctoscope is used. This is advisable also to exclude cancer above. The erosions in question are capillary hemorrhoids, without visible dilatation of the vein. They should be touched with 1 per thousand silver nitrate or 1 per cent. chromic acid two or three times, at two or three days' intervals, supplementing this by introducing a "gauze suppository" or roll of gauze coated with petrolatum medicated with zinc oxid, ichthyol or similar substance. This local dressing is renewed daily and the stools are kept soft. In the majority of cases this has always cured the erosions and thus the hemorrhages in two weeks. If not, the persistence of the hemorrhages justifies resection of the mucosa involved, but a trial might be made of the high frequency current.

Impaired Permeability of the Kidneys.—Genevrier warns the general practitioner that determination of the elimination of water, of chlorid and of nitrogen by the kidneys has no practical value unless the intake of each for three or four days beforehand is known and the amount of urine voided for three or four days previously. The permeability for water is easily shown by the induced polyuria test, drinking 500 gm. water fasting and comparing the amount of urine voided during the two following hours with the amount on corresponding days before. The permeability for chlorids can be determined by the loss of weight when the intake of salt is restricted and the gain in weight when salt is allowed again. The urea content of the urine throws very little light on the permeability of the kidneys for urea. For this, the urea content of the blood is the criterion, and he describes the simple means with which this can be ascertained with the ureameter after treating the serum with sodium hypobromite and phenolphthalein.

Bulletins de la Societe Medicale des Hôpitaux, Paris

March 26, 1920, 44, No. 12

*Meningococcus Septicemia. E. Sergent and others.—p. 428
Myogenous Total Bradycardia. C. Laubry and A. Mougeot.—p. 436
Lethargic Encephalitis. A. Netter and others.—p. 441, 446, 448, 450, 451, 459, 478, 479, 482
Oculomotor Paresis with Parkinson's Disease. Laignel-Lavastine.—p. 458
Vaccine Therapy in Typhus. Monziols and Collignon.—p. 462
*Alcohol in Cerebrospinal Fluid. E. Lenoble and others.—p. 465
Chloral in Idem. Idem.—p. 476
*Erythema Nodosum and Tuberculosis. A. Gendron.—p. 475

Meningococcus Septicemia.—The protracted meningococcus septicemia had no meningitis and no benefit was apparent from serotherapy but the woman of 32 showed a prompt turn for the better after a single intravenous injection of a stock vaccine containing 1 mg. of meningococcus C per c.c., and recovery progressed under three more injections. The pseudorheumatismal fever, arthralgias and papulonodular erythema might have been mistaken for gonorrhea if it had not been for cultivation of the germs from the blood on egg bouillon and ascites bouillon.

Vaccine Therapy of Typhus.—Monziols and Collignon report favorable experiences with a vaccine made from Proteus X_{19}.

Alcohol in the Cerebrospinal Fluid.—Lenoble states in this seventh report of his research on this subject that the presence of alcohol in the cerebrospinal fluid has pathologic significance only when it persists for more than twenty-four hours. It does not persist in this way unless the individual tolerance for alcohol has been surpassed. This threshold differs with different persons, but is never lower than 250 c.c. of absolute alcohol. The alcohol content of the fluid is of less import than its persistence, this was for eighteen days, seventeen days, seven days in experiences related by different writers. Nicloux's quantitative test is accurate enough, he says.

Chloral and Chloroform in Cerebrospinal Fluid.—Ingestion of chloral induced a positive reaction to the Nicloux test for alcohol in the cerebrospinal fluid. Chloroform did not induce the reaction.

Erythema Nodosum in the Tuberculous.—Gendron remarks that the three cases of erythema nodosum and one of a miliary eruption in different members of a tuberculous family in his practice, confirm the connection between these conditions and tuberculosis.

Paris Medical

May 15 1920 **10**, No 20

*Diabetes from Syphilis of Pancreas Carnot and Harvier —p 401
*Coagulation of Spinal Fluid M Villaret and others —p 403
Immediate Treatment of Wounds of Bladder H Costantini —p 407
*Chart for Ambard Ureosecretory Index Mazeres —p 409

Diabetes from Syphilis of the Pancreas—Carnot and Harvier summarize from the literature four cases in which diabetes developed in syphilitics, but necropsy showed only ordinary sclerosis of the pancreas In a case from their own experience, however, a woman of 53 had been presenting symptoms of diabetes and of neurosyphilis for about two years The pancreas was almost entirely transformed into a sclerogummatous mass They believe this to be the first case to be recorded of diabetes from unquestionable syphilitic lesions of the pancreas

Coagulating Spinal Fluid—Massive coagulation with xanthochromia and hyperalbuminosis distinguished the spinal fluid in two cases reported In one of them, by making the puncture at different heights it proved possible to locate and treat the lesion responsible for the anomaly

Chart for Ambard Formula—Mazeres gives a nomograph with which the calculations for the Ambard coefficient are dispensed with The values are determined by drawing a connecting line between figures in different columns

Presse Médicale, Paris

May 19 1920 **28** No 32

*Pneumococcus Infections in Infants P Nobecourt and others —p 313

Pneumococcus Infection in Infants—At the Paris Maternite during the last year all the infants and adults were systematically examined for pneumococci with 55 per cent positive results from 322 smears Type III was found in 133 cases and was responsible for most of the infections When a carrier of Type II had been admitted to the ward it appeared almost at once in the other women and infants in the ward, and a train of infectious processes in the upper air passages followed Isolation is especially important to guard infants against this contagion The infant should be taken away from its mother if the latter becomes affected and be brought to her only to be nursed, and she should wear a veil while nursing the child Screens and veils are not enough to protect an infant in the ward with others having the pneumococcus Contagion by the dust as well as by droplets is to be feared Antipneumococcus serum in treatment of pneumococcus pneumonia and pleurisy in infants and adults has made a very favorable impression especially in three infants of 2 4 and 5 months old Prophylactic vaccination has been tried too recently for a decisive judgment, but others have reported excellent experiences with it The data presented emphasize further the severity of pneumococcus infections in infants

May 22 1920 **28** No 33

*Reduction of Fractures R Baudet and F Masmonteil —p 321
Arsphenamin Responsible for Jaundice P Nicaud —p 322
Copper Sulphate for Cancer of Vagina and Cervix D Pamboukis and G Berry —p 324
*Pepsin for External Application L Chemisse —p 325

Reduction of Fractures—Baudet and Masmonteil expatiate on the perfect results obtained by stretching the limb in a long frame with pressure applied by turning a handle just as a patent corkscrew pulls the cork out of the bottle by pressure on the neck of the bottle A dynamometer is interposed between the foot and the turning handle and this allows the pressure to be graduated The reduction by this means is gentle but complete and it overcomes all tendency to muscular contraction If reduction is not soon complete it shows that interposed tissue is preventing and that operative intervention is imperative without further delay Another advantage of this frame method is that any practitioner can apply the frame alone, without assistance The article is illustrated

External Application of Pepsin-Hydrochloric Acid—Chemisse reviews recent literature on the method of treating vicious scars, torpid ulcers and keloid and to promote absorption of drugs through the skin, by digesting the tissues with a mixture of 2 parts pepsin and 1 each of hydrochloric acid and phenol in 200 parts distilled water

Schweizerische medizinische Wochenschrift, Basel

May 6 1920 **50** No 19

*The Role of the Ovaries in the Organism A Labhardt —p 361
Lethargic Encephalitis O Busse —p 368
*Depilatories L Merian —p 369
Perforation from Cancerous Stenosis of Colon W Odermatt —p 373

Physiology and Pathology of the Ovaries—Labhardt's long presentation of his subject aims to show the predominant importance of the ovaries not only for the genital system but for the whole organism Gynecology is receding more and more from the conception of localized pathologic conditions Instead of trying to treat the local process it is the woman as a whole that has to be treated

Depilatories—Merian lauds the pumice stone method of curing hypertrichosis He has recently seen a woman who had been relieved by this means twenty years ago of a very disfiguring growth of hair and the skin looks normal in both color and texture In very severe cases he prefers roentgen treatment and has thus treated twelve patients with no injurious by-effects For the pumice stone method he has the region rubbed first for from two to ten minutes with a strong soap leaving the lather on for from five to fifteen minutes It is then washed off the region dried and the skin is then rubbed gently with a fine piece of pumice stone twisting it a little while the skin is drawn taut with the fingers of the other hand Then the skin is treated with a cooling salve This is repeated the next evening with another part of the skin and so on each part receiving the application in turn once in eight or ten days Or the region can be rubbed with the finger dipped in pulverized pumice stone The use of pumice stone for this purpose is mentioned in the Talmud

May 13 1920 **50** No 20

*Treatment of Edema R Isenschmid —p 381
School Dental Clinics Jessen —p 386
Embryology of the Prostate F Chatillon —p 390
Galvanometer Dosimeter for Roentgen Rays J Iten —p 393
Masks in Prophylaxis of Influenza A Josefson —p 395 Idem Lauterburg —p 395

May 27 1920 **50** No 22

Diphtheroid Bacilli W Loewenthal —p 421
Pitchfork Severs Optic Nerve Through Nose J Strebel —p 424
Compensation After Loss of One Eye E Ammann —p 426
Colloidal Silver in Female Gonorrhea H Koller —p 428 Concl in

Influence of Diet on the Water Content of the Body—Isenschmid remarks that it is hard to conceive that aside from the skeleton three fourths or four fifths of this body with which we digest and think consists of nothing but water Drinking of water does not modify the water content of the body Its direct dependence on the diet has been emphasized anew by the undernutrition edema reported from various points during the war It could be cured by giving a more nutritious diet or by repose without change of diet the repose restoring the balance between the intake and the expenditure of energy In some cases the edema subsided under merely moving the patients from a cold room to a warm room There is no need for organotherapy although the success of some with thyroid and testicle extract is interesting

The lack of milk in certain countries during the war prevented the Karell treatment of heart disease and led to the use of substitutes which he says surpassed the effect of the original Karell method in many cases Brilliant results have been obtained by some physicians with it Only 1 liter of water or fruit juice is allowed for the beverage and 1 kg of potato cooked without salt is taken during the day in five portions A banana cure has also proved effectual taken in the same way These and the Karell cure are poor in salt, and the small portions and absence of metabolic waste and small intake of fluid make very little demands on the digestive system and kidneys The potassium in the potato is another favorable factor Isenschmid's own experience testifies that restriction of albumin and of fluid and of salt is more effectual in the dropsy of heart disease than restriction of salt alone One patient with extreme edema rebellious to the Karell cure plus digitalis lost in eleven days

16 kg water on a diet of 5/4 liter milk, 200 gm bread, butter, and two or three eggs In some cases it is better to reduce the intake of fluids to 800 c c The edema following dysentery and other protracted wasting infectious diseases is usually ascribed to weakness of the heart, but it is more probable that it is of the starvation edema type Other known factors may be concerned, but to date, a diet conforming to the above principles seems to offer the best prospects for the cure of edema

Policlinico, Rome

April 26 1920 27 No 17

Sarcomatous Mediastinopericarditis L Schupfer —p 475
*Calculi in the Pancreas G Apollonio —p 482
*Unusual Form of Thyroiditis M Fasano —p 484

Calculi in the Pancreas and Diabetes—In the case described by Apollonio the young woman had been presenting symptoms of diabetes for a year and the pancreas was found 12 cm long, with nothing left but a shell crowded with sand and calculi The extreme hemosiderosis in the liver was a further necropsy surprise Marchiafava has reported a case in which compression of the bile duct by calculi in the pancreas proved fatal, but there was no glycosuria

Unusual Form of Thyroiditis—Fasano released pus and necrotic scraps by incision of the thyroid the seat of a sudden inflammatory process in the previously healthy young married woman Besides the chills fever and pain from the acute thyroiditis she developed in the two weeks the complete picture of mild exophthalmic goiter with the three cardinal symptoms, but the Stellwag and Graefe signs were negative After the incision the thyroiditis subsided and with it the exophthalmic goiter symptoms The destructive process had acted like a thyroidectomy

May 3 1920 27, No 18

*Intradermal Reaction in Diagnosis of Echinococcosis P Luridiana —p 499
Arteriovenous Aneurysm of the Subclavian U Benedetti —p 503
Prophylactic Welfare Work for Children A Pratt —p 505

May 17, 1920 27, No 20

Aphasia F Sorrentino —p 547
Iodin in Abortion of Furuncles and Carbuncles D Pacieri —p 549
Physical Training in the Schools G Monti —p 551

Intradermal Reaction in Echinococcus Disease—Luridiana injects into the dermis 0 33 or 0 5 c c of fluid from a hydatid cyst and in case of a positive reaction redness and swelling follow for twenty-four hours or several days Casoni uses hydatid cyst fluid from cattle or guinea pigs, adding a drop of phenol to each 20 c c filtering and keeping on ice, renewing the supply each month Six cases are described with operative control in three and clinical confirmation in the others In one case there were numerous small recent cysts and the reaction was only faintly positive after a negative response at the first test In another case the reaction was negative but a large echinococcus cyst was removed from the spleen Its walls were unusually tough extremely resistant to the knife and this probably prevented any passage of the toxin into the blood so that there was no sensitization The reaction was always negative in other pathologic conditions

Riforma Medica, Naples

April 24 1920 36 No 17

Congenital Cysts of the Neck L de Gaetano —p 401
Case of Symmetrical Cervical Ribs of Unusual Size S Liviérato —p 404
*Rebellious Salivary Fistulas L Stropeni —p 405
The Milk Teeth and the Development of the Face C d'Alise —p 408
Operative Correction of Uterus Displacement E Arevoli —p 410

Cure of Rebellious Salivary Fistula—Stropeni blocked the third branch of the trigeminal nerve by injecting alcohol and this proved as successful in curing the incessant flow of saliva from a fistula leading into the parotid gland as resection of the auriculotemporal nerve which Leriche and others have found promptly effectual He injected 3 c c of alcohol at the base of the skull, corresponding to the foramen ovale, and repeated this nine days later The fistula kept on suppurating, but there was no further secretion of saliva in that gland

Semana Médica, Buenos Aires

Jan 29 1920 27, No 5

McDonagh's Leucocytozoon Syphilidis Matheu and Rojas —p 145
Vaccine Therapy of Diphtheria P Santillan —p 160
Vaginal Cesarean Section with Placenta Praevia T J González —p 167
*Syphilis and Tuberculosis E E Mariño and J C Mussio Fournier —p 170

Feb 5 1920 27, No 6

An Argentine Hookworm Necator Argentinus S F Parodi —p 177
Cysts in Coccyx Sacrum Region A Zeno and A Boden —p 181
Vaccine Treatment and Prophylaxis of Tuberculosis F Gomez Alvarez —p 183
Our Present Knowledge of the Gastric Juice P J Pardo —p 187
Diseases of Orbit and Eyeball R Arguñarriz —p 196
The Public Health and Hospital Service in Colombia E R Cova —p 207

Syphilis and Tuberculosis—Mariño and Mussio state that they have sometimes obtained surprisingly favorable results in treatment of tuberculous patients when tentative treatment for syphilis was given to supplement the usual measures Even where there is nothing to suggest syphilis, asthenia, status lymphaticus or other endocrinopathy may be manifestations of an inherited or acquired taint, and justify mercurial or other treatment with small doses This is liable to be of inestimable value when the parents are robust and free from lead poisoning malaria etc which might have affected their offspring the probability of inherited syphilis as responsible for the endocrinopathy in such conditions being particularly evident

April 15 1920 27 No 16

*Origin and Prophylaxis of Cancer I Cisneros —p 513
Prophylaxis of Tuberculosis in Rosario District J B Valdes —p 527
Treatment of Influenza J A Lopez —p 535

Origin of Cancer—Cisneros insists that cancer is merely a local biologic reaction to a foreign body of organic composition some mass of fibrin or other proteic material that has accumulated by precipitation at some point during a period of lessened vitality, asthenia or depression from any cause The accumulated mass impedes the circulation, and the system is too depressed to get rid of it in the usual way, but the local tissues react to it with tumor production He cites as an instructive example of this sequence of events the case of young Dr Cranet who developed a sarcoma in the mediastinum while under the depression from a rebellious and progressing radiodermatitis The shock from the operations required according to Crile's theory, having further exaggerated the depression

Siglo Medico, Madrid

March 27 1920 67 No 3459

*Pancreatic Infantilism C S de los Terreros —p 221
Lethargic Encephalitis E Fernandez Sanz —p 223 Concln
Biology and Feminism G Maranon —p 226 Concld in No 3461 —p 265

April 3 1920 67, No 3460

Transplantation in Surgery Goyanes —p 241 Concld in No 3463 p 304
Renal Calculi A Pulido Martin —p 244 Concld in No 3461 p 267

Pancreatic Infantilism—De los Terreros refers to backward growth from insufficiency of the pancreas The literature records few instances of this, but he has encountered it in a number of children The pancreatic insufficiency does not entail diabetes in children, although certain features of the metabolism resemble those of diabetes in adults, and transient alimentary glycosuria is common in children His experience has convinced him that the pancreas probably has three hormones one serving for carbohydrate metabolism, one for the interglandular control of growth and development, the third forms the active element in the pancreatic juice In children insufficiency of the two last mentioned hormones will check normal digestion and also check normal growth while the carbohydrate metabolism may proceed normally or with only minimal glycosuria and acetonuria A child with pancreatic insufficiency begins to lose weight, acetone and preacetonic bodies are thrown off in the urine and the thyroid, freed from the pancreas hormone, functions to excess There is usually a tendency to adenoids, pathologic tonsils, mononucleosis and often leukopenia, the resisting powers are low and the children contract disease easily

Deutsche medizinische Wochenschrift, Berlin

April 15 1920 **46** No 16

Physiologic and Pathologic Significance of Ion Balance Hober —p 425
*Simplification of Kjeldahl's Method A Hahn —p 428
Permanganate Tests of Urine and Sputum M Weisz —p 429
Inflammation of Meckel's Diverticulum in Hernia W Budde —p 430
*Death Late after Skull Wounds H Weise —p 431
*Duodenal Ulcers F Mendel —p 433 Concd in No 17 p 458
Ascending or Descending Infection in Tuberculosis of the Male Genital Organs C Kraemer —p 435
Rhinologic Hints for General Practitioner Finder —p 436 Contin

A Simplification of Kjeldahl's Method, Especially for Estimation of Residual Nitrogen—Hahn describes in detail his modification of the Kjeldahl method for the estimation of nitrogen which is far simpler and takes much less time than the original method

Potassium Permanganate in Examination of Urine and Sputum.—Weisz states that he has found still further uses for potassium permanganate in examination of urine He says that the test for urochromogen proved particularly valuable during the war, and he describes another potassium permanganate test, which differentiates uric acid precipitates from phosphates or albumin He also gives his method of contrast staining of sputum by means of potassium permanganate in examination for tubercle bacilli, which shows them up exceptionally clearly The urochromogen test can be used as well for detection of bilirubin the diluted urine becoming decolored when the 1 per cent. solution of the permanganate is added instead of the yellow tint with urochromogen These two substances are so rarely associated that the findings do not conflict. Uric acid causing turbidity in urine is rapidly destroyed on addition of the 1 per cent solution of the permanganate This differentiates turbidity from uric acid in urine or any fluid, with or without preceding treatment with acetic acid The uric acid disappears and the fluid becomes clear on addition of the permanganate

Death Late After Skull Injuries—Weise summarizes several cases to show that skull injuries are always to be regarded as serious and that the prognosis remains uncertain for several years Even two or three years later, frequently, and often quite suddenly while the patients are subjectively well, meningitis, encephalitis or brain abscess, or a combination of these, may develop and end fatally

Medical Treatment of Duodenal Ulcer—Mendel states that in all cases of duodenal ulcer, just to the right of the linea alba, slightly below the midline between the costal arch and the umbilicus there is a tender spot, usually the size of a 50 cent piece or possibly a little larger which is painful on the slightest percussion, whereas just outside of this area even sharp blows cause no pain This tender spot grows smaller as the ulcer heals and decreases in size, and it disappears when the ulcer is cured The reason internal therapy so often fails is that it is not begun promptly Mendel has successfully treated considerably over 100 cases of duodenal ulcer during the past twenty years with no recurrence in the overwhelming majority He demands absolute rest in bed for from four to six weeks, even in mild cases and advises the constant and intensive use of hot moist compresses At night a Priessnitz compress is ordered The patient is restricted at first to a milk diet When the spontaneous pains have decreased and the tender spot as shown by percussion has grown smaller, the diet may be extended so as to include zwieback, potato soup (the potatoes to be passed through a sieve), and finally mashed potatoes, with plenty of butter Rest and diet are the main factors in the treatment, while the moist heat serves to lessen the irritability of the gastric mucosa As a rule the chyme is hyperacid and irritates the surface of the ulcer and causes spastic contractions of the stomach To neutralize this hyperacidity, Mendel has used for twenty years the following prescription dried sodium sulphate 30 parts, dried sodium phosphate, 30 parts, sodium bicarbonate, 40 parts, one teaspoonful, dissolved in a wineglass of water, to be taken four times a day before meals He emphasizes the importance of the sodium phosphate in this treatment, as it has a regulating and sedative influence on the overexcitable vegetative nervous system which is an important factor in the vicious circle with duodenal ulcer

Medizinische Klinik, Berlin

April 4 1920 **16** No 14

*To Ward Off Acute Effects of Arsphenamin W Kolle and others —p 355
Give Antitoxin in All Severe Cases of Diphtheria C Schone —p 359
Electrolysis for Hypertrichosis E Eitner —p 361
Rupture of Aorta in Tuberculous Patient Kornitzer —p 361
Fleeting Edema from Naphthalin Fumes F Rosenberger —p 363
Pathology and Heredity in Plants Conclusions for Comparative Pathology C Correns —p 364

Means of Avoiding Acutely Fatal Effects of Arsphenamin Administration—Kolle Schlossberger and Leupold found from experiments conducted with mice that the intravenous injection of small doses of silver salvarsan furnished perfect protection against the injection of an absolutely fatal dose of the same preparation twenty-four hours later This experiment agrees with the results of Danysz' observations on rabbits These investigations furnish an experimental basis for the clinical custom of giving syphilitics who are especially sensitive to intravenous injections of arsphenamin very small doses at the start

April 11 1920 **16,** No 15

Rachitis in Relation to Backward Growth S Engel —p 383
*Deep Subpectoral Lymphadenitis H Schum —p 386
Parenteral Injections of Milk in Latent Infections Stracker —p 388
Silver Salvarsan and Biologic Aspects of Syphilis in Man E Delbanco and F Zimmern —p 390
Combined Roentgen and Potassium Iodid Treatment of Superficial Actinomycosis R Dittrich —p 394
Modern Theories of Life S Gutherz —p 396

April 18 1920 **16,** No 16

Cause and Origin of Abdominal Pains M Kappis —p 409
Successful Removal of Large Tumor from Occipital Lobe R Cassirer and E Heymann —p 412
Lethargic Encephalitis Hilgermann and others —p 415
Outcome with Fractures of Humerus and Femur Marconi —p 418
Polyuria Following Subcutaneous Injections of Tuberculin C Stuhl —p 420
Atrophy of the Hypophysis H Feit —p 421

Lymphadenitis Deep in Chest—Schum finds that acute subpectoral lymphadenitis presents very characteristic symptoms, occurs rather frequently possesses considerable importance for the surgeon and that the prognosis is always serious even when recognized early and properly treated Sometimes diagnosis is difficult so that a general medical disease process is assumed when in reality there is a well localized process requiring immediate surgical intervention Occasionally contracture in abduction of the arm and the superficial breathing will give the clew that will localize the suppurating process Early operative treatment is indicated even though there may be some doubt about the diagnosis At times a test incision is advisable

Munchener medizinische Wochenschrift, Munich

April 2 1920 **67,** No 14

*Pathogenesis of Peptic Gastric Ulcer S J Haeller —p 393
Residual Nitrogen Content in Human Tissues E Becher —p 397
Capillary Attraction in Bacteriology Friedberger and Lutter —p 398
Seasonal Variations in Response to Tuberculin Hamburger —p 398
The Sachs Georgi Reaction in Blood and Spinal Fluid W Schonfeld —p 399
Comparison of Wassermann Reaction the Stern Modification and the Sachs Georgi Reaction W Hinzelmann —p 402
Local Destructive Action of Pepsin Hydrochloric Acid Mixture on Scar Tissue W Patzschke —p 402
*Periesophageal Abscess from Foreign Body H Herzog —p 404
The Cone of Rays Phantom for Rapid Estimation of Dose in Deep Roentgen Treatment Lehmann —p 405
Necessity for Control of the Electric Factors in Roentgen Treatment F Voltz —p 406
The Anatomic Forms of Pulmonary Tuberculosis A Schrumpf —p 407

Pathogenesis of Peptic Gastric Ulcer—On the basis of experimentation with rabbits Haeller has reached the conclusion that the ulcers produced in rabbits' stomachs by means of large doses of pilocarpin are not the result of muscle spasms However, he admits that if the essential preconditioning factors are already present, severe spastic contractions of the stomach may favor ulceration

Periesophageal Abscess from Foreign Body—Herzog emphasizes the danger of endeavoring to force a foreign body in the esophagus downward owing to the likelihood of damaging the wall of the esophagus as in the case reported He advises even against the swallowing of bulky food with

the idea of exerting pressure on the foreign body Such measures are likely to cause severe peristaltic movements and vomiting whereby points and jagged edges of the foreign body may be driven into the wall of the esophagus entailing perforation, or, if the body is pushed downward, it may cause new lesions in lower segments of the esophagus, so that in place of one injury a series of injuries may result Immobilization of the esophagus is indicated from the moment that the foreign body enters it Esophagoscopy should be resorted to at the earliest possible moment Codein and belladonna will render good service until the patient can be given a direct examination The subjective symptoms are often misleading There may be no pain in spite of the presence of a foreign body, then again severe pain may be present although the foreign body has already passed through the esophagus Esophagoscopy is therefore the only rational procedure, this does away with guess work and prepares the way for the proper therapy

April 9 1920 67, No 15

*Practical Results of Cineplastic Prosthetics F Sauerbruch and A Stadler —p 417
*The Sachs Georgi Test G Wodtke —p 419
*Parallel Wassermann and Sachs Georgi Tests T Baumgartel —p 421
Results of Later Treatment of Syphilis G Bruck —p 423
*Traumatic Emphysema from Foreign Body in Trachea H Herzog —p 424
Internal Use of Iodin in Coryza and Anginas J Finck —p 426
Apoplectiform Symptoms of Menieres Disease Without Disturbance of Hearing Following Influenza A Bittorf —p 427
Mediastinal Dulness in Influenza A Kirch —p 427
Lethargic Encephalitis in Eleven Weeks Infant A Hirsch —p 428
Edibility of Beans of Phaseolus Lunatus H Lincke —p 428
Roentgenologic Laboratories and the Gas Famine F Muhlmann —p 429
Predetermination of Sex P W Siegel —p 430

Cineplastic Operations on Amputation Stumps—Sauerbruch and Stadler report that they now have a record of 1 500 cases in which tendon and muscle loops tunnels etc have been made in the stump to actuate artificial hands and 1 200 of the men have already been provided with prostheses Most of the men can lift weights up to 10 or 25 kg raising them for 3 or 5 cm A recent improvement is to take the skin flap to line the loops etc, from the abdominal wall It has been found possible also to utilize muscle power from the muscles of the chest The details of the cineplastics are described but without illustrations They say that the success that is being realized at the Munich and Singen centers for this work is converting the skeptical, and demonstrating the advantages of the artificial arm devised by Sauerbruch and especially what is called the Singen model

The Sachs-Georgi Test—Wodtke states that the sensitiveness of the Sachs Georgi precipitin reaction can be increased by the use of double the usual amount of serum Some serums however, react with the usual quantity of serum more sharply than with double the quantity By using both the usual and the double amount of serum, an increased number of positive results can be obtained without detracting from its diagnostic significance so far as Wodtke's experience extends, although some have feared such result By the use of several different extracts a higher degree of sensitiveness may be secured, besides cholesterin-fortified extract of beef heart cholesterinized extract of human heart may also be used

Comparison of Results with the Wassermann and the Sachs-Georgi Tests in Syphilis—Baumgartel reports that according to the observations of various authors in 25 000 parallel blood examinations and in 7,000 parallel tests of his own, the results by the Wassermann and the Sachs-Georgi reaction agree in about 90 per cent of the cases In using the Sachs-Georgi method he recommends that the reaction be taken solely at the incubator temperature The results should be noted not only after twenty-four hours but also after two and forty-eight hours' heating of the test tubes at 37 C In this manner a certain number of cases of syphilis that are atypical from a serologic standpoint will be discovered

Traumatic Emphysema from Foreign Body in Trachea—Herzog reports a case in which the first paroxysm of coughing that followed the entrance of the foreign body (a portion of a prune pit) in the trachea seemed to have brought about the traumatic injury of the lung tissue resulting in interstitial emphysema, which appears to be a very unusual occurrence The patient, a girl, 1 year old, died following tracheotomy

Internal Use of Iodin in Coryza and Tonsillitis—Finck gives a preliminary report of his experience with the prophylactic and therapeutic use of iodin in acute infectious conditions in the upper air passages The iodin does not suffice to kill the bacteria but seems to prevent their further development Either the nutrient medium is unfavorably affected for the growth of the bacteria or the iodin exerts a direct damaging effect on the bacteria themselves He uses iodin in a 10 per cent solution of potassium iodid (purified iodin 0 3 gm , potassium iodid, 3 gm , distilled water, 30 gm) For children up to 10 years of age the dose is 5 drops, for older children and adults, 8 drops, for stout or heavy-set persons 10 drops in a quarter of a glass of water, a half a glass of water to be drunk afterward For prophylactic purposes he prescribes one dose daily to be taken at the first signs of infection In some of the severe cases the prophylactic dose may not suffice in which case two therapeutic doses one two hours after breakfast and one before going to bed are recommended The dosage must never be increased as iodism with coryza would result Recovery should follow in from two to three days A single dose should then be continued for ten days

April 23 1920 67 No 17

Physical Training in the Universities Gruber —p 473
Report of the Cologne Salvarsan Commission Meirowsky —p 477
The Pharmacology of Tuberculin F Hamburger —p 480
The Mastic Reaction W Schonfeld —p 482
*Barbital As Adjuvant in Morphin Withdrawal Hornung —p 484
Important Source of Error in Testing Urine for Albumin with Sulphosalicylic Acid Grete Lach and J Reitstoetter —p 484

Physical Training in the Universities—Gruber discusses the need of more systematic physical training in German universities now that universal military training is a thing of the past While the youth of the land need to be well trained physically there is some danger of overdoing the matter and allowing sport to assume too much of a professional aspect of which there were signs even before the war

Committee Report on Mishaps with Salvarsan—Meirowsky, secretary of the committee appointed by the Allgemeiner aerztlicher Verein of Cologne publishes a report of its work In preparing the statistics on the number of deaths resulting from arsphenamin therapy 225 780 injections of arsphenamin, neo-arsphenamin and arsphenamin sodium were considered The number of deaths resulting totaled 20 one fatal case for every 11 289 injections 12 deaths were designated as certainly due to arsphenamin treatment 5 as questionable, and 3 as indirectly due to arsphenamin All deaths from encephalitis following arsphenamin treatment were set down by the commission as certainly due to arsphenamin On the basis of its investigations the commission recommends that the maximal dose for men be placed at 0 6 gm and for women at 0 45 gm It recommends further that manufacturers be prohibited from putting up larger single doses than these One instance of jaundice was recorded for each 5 000 injections one in 2 000 for old salvarsan and one in 6 000 for neosalvarsan With the latter it was generally tardy and it was most frequent in the tertiary stage Injury of the skin was recorded in 48 cases, including 5 that terminated fatally Of this number, 37 of the cases and 3 of the deaths must be attributed to the medication, as also the 15 cases of neurorecurrence

The Mastic Test—Schonfeld describes his modification of the Emanuel-Cutting mastic test to apply to the cerebrospinal fluid The findings coincide with those of the Wassermann reaction only when there are pronounced specific changes in the spinal fluid, such as are found in syphilis of the brain and in general paresis He says that the mastic reaction therefore cannot be considered as a substitute for the Wassermann reaction It is interesting from a theoretical standpoint but clinically its diagnostic value is no greater than that of the Pandy, Weichbrodt and other reactions

Barbital as an Adjuvant in Morphin Withdrawal—Hornung has found barbital useful in combating withdrawal symptoms in the treatment of morphin addicts and describes in detail his method of using it The advantage is that the patient is kept in a more cheerful frame of mind during treatment

Wiener klinische Wochenschrift, Vienna

April 15 1920 **33** No 16

The 1920 Epidemic of Lethargic Encephalitis C Economo—p 329
*Pathology of Angina J Fein—p 332
*Effects of Carbid on Human Skin O Sachs—p 335
Influenza Epidemic of 1918 F Raffelt—p 334
*Intermittent Course of Gastric and Duodenal Ulcer E Schutz—p 336
Periodicity of the Symptoms of Gastric and Duodenal Ulcer F Mandl—p 337 Idem F Brunn and others—p 338

Pathology of Sore Throat—Fein says that the inflammatory process associated with sore throat is very rarely confined to any single part of the faucial ring, unilateral sore throat does not occur The entire system of lymphoid structures becomes affected all at once Contrary observations are due to wrong conceptions and to the fact that secondary factors attract the most attention He suggests the term "anginosis" in place of 'angina' as it marks better a general infection, such as sore throat undeniably is Infectious sore throat and the so-called complications in other parts of the body are simply manifestations of one and the same infection and are not to be regarded as cause and effect The phenomena observed can be explained only by assuming an endogenous infection by way of the blood or lymphatics Other things being equal, the intensity of the local inflammatory process depends on the size of the mass of tonsil substance The less substance there is, relatively, the less there is to become involved and the shorter will be the course of the inflammatory process

Effects of Carbid on Human Skin—As prophylactic measures for those who are handling carbid Sachs recommends that gloves be worn and that petrolatum be rubbed into the hands, following which they should be powdered with talcum

The Intermittent Course of Gastric and Duodenal Ulcer—Schütz regards the periodicity of the symptoms of duodenal ulcer as a characteristic feature of great value in its differential diagnosis The attacks in duodenal ulcer are not only periodic, but they occur mainly during the cold season, or at most during the spring and fall, whereas symptoms from gastric ulcer appear at irregular intervals The cause of this different behavior is not known The condition of the patient during the remission in the two disease processes varies widely, with duodenal ulcer the patients are often entirely free from subjective symptoms, whereas with gastric ulcer dyspeptic symptoms very frequently persist during the periods of remission This is one of the main reasons why formerly duodenal ulcer was often mistaken for a gastric neurosis The supposition is that gastric ulcer is more exposed during digestion to mechanical and chemical insults than is the duodenal ulcer

Zentralblatt fur Chirurgie, Leipzig

May 29 1920 **47** No 22

*Osteochondritis Deformans of the Hip Joint in the Young H Sundt—p 538 Idem H Waldenstrom (Stockholm)—p 539 Idem G Perthes—p 542
Compression of Commission Bile Duct by Retroduodenal Tumor Recovery after Removal of Tumor A Brentano—p 547

Osteochondritis Deformans of the Hip Joint in the Young—Sundt ascribes the priority in the description of this obscure affection of the hip joint to Legg and Calve and proposes to call it malum coxae Calve-Legg-Perthes Waldenstrom reproduces his published description of it a year before Legg's article Both writers protest against calling it osteochondritis as there is no inflammation Waldenstrom urges to call it 'coxa plana,' in analogy to coxa vara and coxa valga The special characteristic is the flattening of the head as weight bearing crushes it flatter when nutritional disturbance has interfered with its proper development This term, coxa plana leaves the question of the etiology untouched It can be supplemented by the descriptive terms, traumatic, tuberculous, hypothyroid, etc

Perthes on the other hand persists in advocating the name osteochondritis deformans juvenilis as this classes it with osteochondritis dissecans of the knee joint, both the result of nutritional disturbance from impeded circulation from some cause He cites a number of instances of its bilateral development which suggest that besides trauma more general disturbances may be involved in the etiology Several have observed a familial tendency, and he describes a case in which the hip joint affection was evidently an after-disturbance causally connected with an acute infectious disease acute febrile rheumatism in the girl of 8 The flattening of the head of the femur did not become evident until eight months later although the child began to limp a month after the febrile rheumatism Probably he remarks in conclusion a number of causes may be responsible for the obstruction of the superior artery of the neck of the femur (Legg has called the affection osteochondral trophopathy of the hip joint Among the articles on the subject published in THE JOURNAL were Freiberg's Aug 26 1916 p 658 and Blanchard's, Sept 29 1917 p 1060)

Zentralblatt fur innere Medizin, Leipzig

April 17 1920 **41** No 16

*Slow Septic Endocarditis E Munzer—p 282

April 24 1920 **41** No 17

Effect of the War on Denmark and Switzerland G Rosenfeld—p 305

Slow Septic Endocarditis—Munzer after having published an article on this subject twenty years ago now takes up the subject again and treats it in the light of recent investigations and observations In the majority of cases *Streptococcus viridans* is responsible but in a few cases it may be *Streptococcus lanceolatus* For the differential diagnosis only the bacteriologic blood test is decisive The mere presence of streptococci in the blood of patients suffering from endocarditis does not justify any prognostic conclusions except from the number of the bacteria Chills and enlargement of the spleen are signs of very bad import In all cases of septic endocarditis, diagnosed early as such by blood examination a streptococcus antiserum should at first be tried If that fails, intravenous arsphenamin treatment should be considered As a last resort splenectomy may be indicated

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

Dec 27 1919 **2** No 26

*Accessory Pancreas P Nieuwenhuijse—p 2106
Urethral Polyps G O E Lignac—p 2114
*Progressive Perichondritis J F O Huese—p 2120

Accessory Pancreas.—A supplementary pancreas is usually merely a necropsy surprise but it may entail clinical disturbances during life Scagliosi incriminates it as a factor in duodenal ulcer in certain cases He found aberrant pancreas tissue in the wall of two ulcers and de Jong found the same in the hypertrophied tissue of stenosis of the pylorus Hulst found an accessory pancreas in the wall of an intestinal diverticulum To date Nieuwenhuijse says there is no authentic instance of aberrant pancreas tissue being found in a malignant tumor In a personal case of which he gives illustrations the aberrant pancreas tissue formed a bunch under the mucosa of the stomach above the pylorus The macroscopic picture suggested cancer, but the microscope refuted this

Progressive Perichondritis—In Huese's case the inflammatory process was in the costal cartilages of the man of 53 It started with an abscess close to the perichondrium of the eleventh rib and soon involved the stomach wall and spread right and left and up and down, skipping the ribs the man dying of cachexia Only two analogous cases are on record, he says

April 3 1920 **1**, No 14

Action of Bile and Bile Salts on the Principal Digestive Ferments J Temminck Groll—p 1157
*The Calcium Level in the Blood Stheeman and Arntzenius—p 1168
*Extramembranous Pregnancy G C J Bol—p 1177

Importance of the Calcium Content of the Blood—Stheeman and Arntzenius state that the calcium content in the

blood may be high in rachitis and thus mask the actual calcium deficit in the tissues but the latter is disclosed by the Erb sign Whenever the motor nerves display excessive irritability in response to electric tests, there is calcium deficit, regardless of the calcium level in the blood at the moment It is evident, therefore, they say, that there is more than one kind of calcium in the blood a biologically efficient and a nonefficient kind one for growth and one for metabolic processes When phosphorus and cod liver oil are given the level of the calcium in the blood begins to rise in ordinary conditions but with rachitis the exact reverse occurs The calcium content of the blood declines as the calcium in the blood and from food is diverted to the bones The proportion of inactive calcium grows less and the level of total calcium in the blood falls Then gradually as conditions right themselves the calcium content of the blood rises anew This definite rise is constantly observed as the child throws off the rachitis and the Erb and the Chvostek signs are no longer apparent In the absence of both of these signs calcium impoverishment is scarcely probable In conclusion they reiterate the importance of estimation of the calcium content of the blood It is even more important than research on the calcium metabolism as the calcium balance does not indicate whether there is calcium impoverishment or calcium abundance The calcium content of the blood however combined with electric tests of the peripheral nerves permits continued oversight of conditions (See abstract of their preceding article July 3 p 71)

Extramembranous Pregnancy—Attempts to induce abortion at the third month were evidently responsible for the extramembranous development of the fetus It was delivered naturally at term but had multiple deformities and died soon after birth

Hospitalstidende, Copenhagen

May 8 1920 63, No 18

*Differentiation of Exudates and Transudates R B Larsen and K Secher—p 273
—Influenza S T Sørensen—p 279 Concd in No 19 p 289

To Distinguish Exudates from Transudates—Larsen and ... commend as very reliable, Sochanski's technic for purpose It never failed in the thirty-eight cases tabu... The reagent is made with 1 c.c. each of a 1 per cent solution of phenolphthalein and of tenth-normal solution of sodium hydroxid to which double distilled water is added to a total of 100 c.c. To 9 c.c. of this fluid is added a drop of the fluid to be tested The reagent was always decolored when the fluid was an exudate while the tint remained unchanged with the transudates The reaction can be made more sensitive by using lesser amounts of the reagent The findings are more reliable than with determination of the albumin with other tests of the kind as is shown by the parallel findings with a titration and other tests

May 12 1920 63, No 19

*Electric Conductivity of Solutions J Christiansen—p 297

To Determine the Electric Conductivity of Solutions—Christian uses a U shaped tube For 7 cm at each end, the diameter is 7 mm Below this the lumen narrows to 1.8 mm, the length of this capillary portion forming the loop of the U is 32 cm The tube is introduced into the electric current, a wire running down into each end of the tube a short distance, the tube filled with the fluid to be tested The street current can be utilized, interposing a voltmeter recording up to 220 volts, corresponding to a resistance of 3 000 ohms The reading is made by merely turning on the current and watching the voltmeter The higher the figure it records, the less the resistance offered by the fluid that is the greater its conducting power To keep the temperature even throughout, the U tube stands in a cylindrical glass full of water at 18 C (64 F) He gives an illustration of the U tube and also of a modification of it to use when only a very small amount of the fluid is available and says that when it is a question of determining the total amount of salts in the urine this is the simplest of all tests for the purpose It might also be used to determine the amount of free hydrochloric acid in the stomach content The method can be used also to test the segregated urine from the two kidneys, in health the conductivity is practically the same in both

Hygiea, Stockholm

April 30 1920 82, No 8

Influenza at Sahlgren Hospital C A Wallgren—p 257
*Serotherapy of Ulcus Molle J Reenstierna—p 270

Serotherapy of Chancroid—In Reenstierna's case the infection with ulcus molle was of thirteen months' standing, and had proved refractory to vigorous and prolonged treatment of all kinds He then inoculated the arm with pus from the venereal sore, and two typical pustules developed from which the streptobacillus was cultivated An antiserum was prepared from the streptobacillus and by the second day after the serotherapy was begun a marked change for the better was evident The infection was manifestly conquered, after which the extensive sore in the groin rapidly healed

Ugeskrift for Læger, Copenhagen

April 29, 1920 82, No 18

Ultimate Outcome of Sanatorium Treatment J Ostenfeld—p 569 Cont'n
Pathologic Fluctuations in the Metabolism During Repose Marie Krogh—p 577 Begun in No 17 p 537

Fluctuations in Metabolism During Repose—Krogh reports extensive study of the influence of the thyroid gland on the metabolism its exaggeration in exophthalmic goiter and hyperthyroidism in general and its reduction in myxedema and cretinism With exophthalmic goiter this increased metabolism should rank beside the three cardinal symptoms of the disease and in the absence of the latter will clinch the diagnosis in dubious cases testifying to the pathologically increased production of thyroidin She tabulates the findings in thirty-four cases under eleven headings, including the respiratory quotient, gaseous interchanges and absorption of oxygen per kilo and minute and square meter of surface but emphasizes that the absorption of oxygen is the main criterion This will differentiate in dubious cases myxedema from adiposity will reveal incipient exophthalmic goiter, and allow supervision of the progress under treatment In a communication in No 19, Nordentoft protests that exaggeration of the metabolism cannot be accepted as the criterion for the differential diagnosis of hyperthyroidism until we find out what influence hyperthymism has on the metabolism

May 13 1920 82, No 20

*Chronic Multiple Arthritis H Jansen—p 627 Concd No 21 p 655
Outcome of Sanatorium Treatment of Tuberculosis J Ostenfeld. —p 636 Conc'n

Chronic Multiple Arthritis—Jansen classifies chronic arthritis according as rheumatism traumatic static and senile causes are responsible, the secondary uric acid polyarthritis and the primary chronic progressive form which is known variously as multiple arthritis deformans, primary asthenic gout arthritis nodosa and rheumatoid arthritis His experience with 333 cases, exclusive of the traumatic and static forms has demonstrated that with physical measures heat diathermy massage light baths, hot sand bags etc., if the patient takes hold with energy and perseverance, far more can be accomplished in treatment than is generally supposed possible The aim is to heat the joints, not to induce sweating The joint is moved in the water or light bath, and in order to allow this exercising of the joints the bath tub is made extra large and the patient sits on a stool in the water, the heat permitting great mobility in these kinetotherapeutic baths as he calls them It has been his experience that diathermy and roentgen treatment did not accomplish any more than ordinary physical measures and sometimes less But radium emanations have proved extremely useful in treatment of chronic polyarthritis both in his hands and in Falta's experience in Vienna Jansen warns against keeping polyarthritis patients too long in bed, the active mobilizing exercises should be begun even before they are able to get up He adds that it is a sin to put them in cotton clothing as is done often in hospitals Their peripheral circulation is poor and they need woolen and the rooms should be dry To encourage the patient is an important element

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THE RIGHTS OF THE CHILD*

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The triumphs of internal medicine and surgery in the last half century have been marvelous, and suffering humanity has been greatly benefited Many obscure cases of disease have been patiently studied out, and the proper remedies applied By new methods of diagnosis and the use of instruments of precision, a secure foundation has been laid, and medicine is no longer guesswork and empiricism it has become a definite science Cause and effect have been studied, and rational procedures discovered to assist nature in restoring pathologic conditions to normal

Specialism is now the order of the day Almost every day sees a new variety of specialist born If the specialist has built his knowledge of a specialty on the secure foundation of an intimate knowledge of the human body in sickness and in health, and has not been led astray by the ignis fatuus of belief that all human ills may be cured by remedying the conditions found to exist in the particular organ or organs that he has chosen for his attention, but regards the human body as a wonderful mechanism with every organ depending on the proper functioning of all organs, then the practice of a specialty is of the greatest benefit to humanity, for it is admitted to be impossible for one brain to know all the minutiæ necessary for the treatment of each individual organ that may not be properly functioning

Preventive medicine should rank as a specialty, and the health officer or preventive disease specialist should be recognized as authority on his chosen branch, and he should confine himself as do other specialists to the things pertaining to the prevention of diseases To be a preventive disease specialist, however, he should have had all the training in diagnosis and treatment of disease that makes a first class general practitioner Having acquired this knowledge and in addition studied and mastered the problems of public health, he may then offer his services to the public as a specialist in matters pertaining to preventive medicine Having perfected this specialty, he should no longer practice curative medicine

The opportunities now offered in this branch of the profession for trained men are many and lucrative, and we must impress on the profession as well as on the public that because a man has the degree of M D he is not necessarily a health officer The public is recognizing these facts, and if the physician is to retain his position as a leader in the fight to prevent disease he must accept the public verdict and recognize the preventive disease specialist, just as he does the ophthalmologist the aurist the pediatrician, the urologist and the specialist in diseases of the stomach or any of the other specialists

Unfortunately little time is now given in the medical schools to the teaching of preventive medicine The student is trained in the diagnosis and treatment of diseases looking toward a cure, and his mind is directed solely toward curing the ills to which flesh is heir, having but little idea about how these diseases could be prevented The awakening to these facts is shown in many medical centers and doctors of public health will soon be not as rare as they are at the present time

PREVENTION OF GREATEST NUMBER OF DEATHS

Our vital statistics reveal that more than 33⅓ per cent of all our deaths are of children under 5 years of age It is in this branch of preventive medicine that the greatest progress can be made

Death will overtake all of us sooner or later, but we should be able to keep from his cold grasp the infant and tender child The spectacle of Rachel weeping for her children, and refusing to be comforted because they are not, would not be so often seen if we would make a proper study of what I have termed the rights of the child, and attend to securing these rights for all children

This subject is timely because the world is just emerging from the gloom of the death struggle for human rights, and the nations are taking stock of their assets War pestilence and famine have ravaged the nations of the world Money has lost its value ancient thrones have crumbled and fallen, statesmen and philosophers of all nations have turned their eyes to the child as the savior of the world One supreme fact is acknowledged by all—that their greatest asset is the child Thinkers the world over are giving their attention to the problem of increasing the number of children and making the world safe for them

If we read aright the lesson of the war to this country through the findings of the draft boards, it must be impressed on us that we have wasted our birthright, have ignored some of the fundamental rights of the child, and as a consequence, when our government was called on for its man power, it did not have that man power which its population indicated

The rights of man have gradually emerged from slavery to freedom Runnymede the 15th of June 1215, when King John signed Magna Carta, the eloquence of Rousseau Voltaire, the fiery baptism of the

* Chairman's address read before the Section on Preventive Medicine and Public Health at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

French Revolution, and our own Declaration of Independence have given to man the inalienable rights to life, liberty and the pursuit of happiness Now, no one disputes that rank is but the guinea stamp—"A man's a man for a' that" "Honor and fame from no condition rise Act well your part, there all the honor lies"

The rights of woman, too, have been slowly achieved, from the time of Mary Wollstonecraft of England, who first wrote the foundation of the rights of woman, down through Susan B Anthony, Emeline Pankhurst and the militant suffragettes of England who burned the English country homes heckled the prime minister, to the women who picketed our own President in Washington, and by general waving of the yellow flag at last achieved their aims The ballot is now in the hands of the women, and with it they have gained all their rights, both real and imaginary

But, what of the child? Who has championed its rights? Summoned against its will and without its consent into this world of trouble, pain, sickness and finally death, what Rousseau or Voltaire shall sound the tocsin and call on the infant "mewling and puking in the nurse's arms," to demand that its own mother shall give it the lactic fluid that is its primal right Bid it howl like all the heads of Cerberus against being condemned to partake of milk of cerulean hue contaminated by Bulgarian bacillus prescribed by some adolescent and ardent disciple of Esculapius What Danton or Robespierre shall band together the sansculotte toddlers so that they may not be torn from the kindly face of mother earth, washed and dressed and sent to kindergarten, where all of their play is so scientifically arranged by followers of Pestalozzi and Froebel that good fairies are unknown to them, and, to paraphrase Wordsworth, a primrose beside a mossy bank is to them but a primrose, nothing more, where they are taught like the clown in Mrs Browning's poem to pick simples, turning a broad back to the glory of the stars Who shall demand for them the right to believe in fairies, the right to sunshine and to flowers, to the fresh air, and to green fields, to all that makes up the paradise of childhood Who will lead another Children's Crusade for these, their ancient rights?

BIRTHRIGHT OF THE CHILD

The rights of the child named in the order of their sequence, and order of importance, may perhaps be thus arranged

1 The right to be conceived Strange as it may seem, this right has been more successfully denied to the child than perhaps any other of its rights Malthus wrote and taught that in order for a country to be prosperous, the number of babies must be in ratio to the amount of food produced This, of course, implied birth regulation Napoleon, on the other hand, when asked by Madame de Stael who was the greatest living woman of France, replied, to her chagrin, "Madame she who has borne the most sons for France" Here we have the opposite poles of thought In this country we have not lacked apostles for both creeds Our own Roosevelt's slogan was more babies and better babies, and he fought the then growing tendency of the American family under modern conditions to consist of a human parasite, called a wife, and an idolized poodle dog To the transcendentalist who believes that all souls are drawn from the Over Soul, and enter the material body but to perfect themselves by the trials and tribulations of this world and, after blind effort to reach the light, finally return to the Over Soul perfected by these struggles for higher things, the denial of the right to be conceived and born is to deny the whole scheme of the universe, is a sin against nature, and therefore unpardonable

2 The right to be born after conception Few will be found to advocate openly the converse of this proposition But our birth registry, and the enormous number of miscarriages and abortions which occur will show that, in practice, many, far too many, deny the child this right We medical men must be ever on the watch to prevent and expose these violations of the law of God and man

3 The right that its parents shall be healthy, both mentally and physically, in order that the child shall not enter the race of life handicapped by transmitted disease or mental weakness

The problem of eugenics, as first advocated by Galton in 1884, has had many followers In 1904, Galton endowed a chair in the University of London for the purpose of the study of agencies under social control that may improve or impair racial qualities of future generations either physically or mentally Galton's work has been elaborated and laws have been passed in many states to endeavor to safeguard the child in this right

By law in many states certificates of physical fitness for marriage have been required of both contracting parties While we concede that this is a step in the right direction, much study is yet necessary before we pass arbitrary laws, for a physically perfect man and woman may never produce a Shakespeare, a Raphael or a Beethoven and some of the greatest additions to human knowledge and happiness have come from those whose earthly shell was misshapen, for the body must always be regarded as the stringed instrument on which the soul plays wondrous chords, and this would be a dreary world, indeed, without poetry, music and art

One of the best examples of the way in which eugenics has been carried out was recently given by the English nobility, in whom for centuries has been inculcated the idea that an English gentleman is the finest work of God The answer came at Mons, where the flower of the English nobility laid down their lives gallantly fighting with their faces to the foe, for the rights of democracy

4 The right that its mother shall be so cared for by the state that neither through poverty nor ignorance shall she bring it into the world in unhygienic surroundings, nor under superintendence of those who are not properly trained to give the most skilful treatment to the mother in this her time of supreme helplessness and agony This means that maternity hospitals must be maintained in the city, and that in the rural districts trained medical men and skilled nurses must be easily available

5 The right to have its own mother's milk until it is old enough to be weaned This we regard, perhaps, as the most important right, and the one most frequently denied In the rich it is denied because some complaisant boudoir physician agrees with the mother who desires to be rid of the burden of nursing—that her milk does not suit the child, that she does not give sufficient quantity, that it will injure her figure that it is best for the child not to nurse, and that it disfigures the tender mouth of the child and makes it misshapen

All of these arguments you and I have heard In the poor it is denied because grinding poverty prevents the mother from giving the time necessary for nursing her little ones The state should provide that no mother should have to labor so hard that she is unable to nurse her baby Pensions for mothers are given in England before and after the birth of the child, and there is no expenditure of money a state can make that will pay better dividends than the care of the mother and babe Old Jacobi, that Nestor of medical men, said after years of experience that a woman who could have a baby could in 90 per cent of the cases nurse it But nature takes her revenge In the rich she makes the mother strive by seeking new pleasures every day and excitement of all varieties, to forget the pressure on her breast of little hands, and the dewy mouth of the babe which she has robbed of its birthright In the poor, the mother, instead of having an infant every two years, has one every year, for normal conception does not take place before the child is weaned and the poor do not understand all the arts of preventing conception known to the rich

6 The right, guaranteed by the state, that every baby born shall have an equal chance with other babies to develop into the normal, healthy child This is the problem of the health officer that the child shall not have to suffer from the ill effects of communicable diseases, that measles, whooping cough and diphtheria shall no longer be called children's diseases, that the tender babe shall be cared for by all the power of the state, as it lives its happy life and grows in wisdom and stature This also includes medical inspection and correction of defects

7 The right that, when it reaches school age, it shall have the best that the resources of any government can command It should have properly ventilated schools, carefully lighted and heated with the most approved methods of sanitation, and if a proper diet cannot be provided in the homes of the poor, such diet should be provided in the schoolroom so that its budding mind may be trained that it may attain to industrious, sober and healthy citizenship and take its place in the ranks of producers and be a real asset to the government that has cared for it This is the remedy for bolshevism These methods will stamp out the unrest of the world, and if the rights I have tried to indicate are given the child, the future of the race is assured

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Mental Hygiene of the Child—Those concerned with the welfare of children should ever bear in mind that the impulsiveness and everchanging activity of a number of so-called fidgety children are but symptoms of mental fatigue, says W L Treadway (*Am Child Hyg J Tr* Nov 11-13 1919) Normal children are active impulsive and inquisitive This is nature's method of education and children, therefore should be allowed to exercise these mental traits Rigid discipline tends to curb natural activities, which then seek outlets in other more or less roundabout ways For example, too rigid discipline tends to cause the harboring of resentment against and disregard for those in authority When once discipline is relaxed the child having failed to learn to control his impulses frequently finds himself in difficult and compromising situations Disciplinary measures should follow the form of substituting desirable activities for undesirable ones To do this effectively those responsible for the welfare of the child besides having an understanding of personality, should be able by tact to secure attention and discipline without apparent effort and without the knowledge of the child This is especially important when the impulsiveness and activity of the child are so marked as to attract attention

THE TREATMENT OF OBSTINATE OCCIPITOPOSTERIOR POSITIONS

JOSEPH B DE LEE, M D
CHICAGO

I make no apology for presenting such an old time-worn and familiar subject My reasons for doing so are (1) In spite of all that has been said and written about this particular anomaly of mechanism of labor, it is one of the most frequently overlooked, (2) it still is responsible for—I may say without fear of contradiction—thousands of infant deaths each year, and for many maternal deaths, (3) the condition itself and the operations performed because of it cause untold and untellable maternal and infant suffering—the children's brains are damaged the mothers' soft parts lacerated and destroyed (4) I have a new and simple method of treatment

The vast majority of cases of occipitoposterior positions will if given time enough rotate spontaneously and terminate as occipito-anteriors The majority of these will do so speedily, and with no danger to either mother or child A part, however, rotates so slowly and labor drags on so long, that both the mother and the child are harmed The child particularly suffers from cerebral compression and disturbances due to a mild chronic asphyxia Even though finally born alive, it frequently succumbs to the effects of the delay, cerebral hemorrhage or atelectasis pulmonum For the mother, both morbidity and mortality are higher because of exhaustion and infection from the prolongation of labor and the frequently needful operations with the inevitable lacerations The word obstinate is therefore applied to those occipitoposterior positions that remain such, in spite of prolonged powerful pains, or when the length of the labor because of weak pains, in itself, becomes an element of danger

The most important matter in cases of abnormal rotation is their recognition The fact that the occiput is not diagnosed as posterior, but considered to be anterior, or, indeed, not considered at all, is responsible for most of the fetal deaths and maternal injury

The character of the labor often gives a strong hint as to the cause of the trouble A long first stage, weak, irregular ineffective pains, slow effacement and dilatation of the cervix, premature rupture of the bag of waters, head persistently high above the inlet—these usually accompany occiput posteriors On examination, especially in thin women a glance at the abdomen may suffice—there is a distinct hollow above the pubis The occiput is too deep in the flank to be felt, but the forehead often projects over the flank The shoulder is not in front as usual It, too, is far in the flank The heart tones are heard [illegible] back, unless as not seldom happens the head is a little and the chest is thrown out against the uterine wall The heart tones are then on the same side as that of the forehead, opposite the back, and therefore we are likely to be misled in diagnosis of face presentation or of presentation opposite that of the reality e g, breech presentation may impress one as a [illegible]

On vaginal or rectal examination in labor, that the head is very [illegible] some deflexion This brings [illegible]

nearer the middle axis of the pelvis and better within reach of the examining finger The small fontanel is found to the right or left, behind the transverse diameter As labor advances, usually the head flexes, and the small fontanel sinks, comes into the transverse diameter, then anterior to it It is important for the accoucheur to know whether nature intends to effect this mechanism He awaits a pain and palpates the head carefully during its action If the small fontanel makes or tends to make the movement just mentioned, he may feel reasonably sure of spontaneous anterior rotation and an easy delivery This he may also assume if the head rotates properly in the right direction under light pressure by his finger

If posterior rotation is to be the mechanism intended by nature, the head descends in moderate deflection, often in the transverse diameter of the pelvis, and the occiput after engagement is found in the hollow of the sacrum The small fontanel may be easily felt, either rectally or vaginally, near one sacroiliac joint, the large fontanel is behind the pubis, the sagittal suture lying in one oblique or sometimes directly anteroposteriorly

Nature terminates these cases in one of four ways (1) Under strong pains, even late, anterior rotation of the occiput occurs and the labor ends as usual, (2) rotation takes place partially and the head remains transversely until art steps in and extricates the child from its precarious condition, (3) if conditions are favorable, the head is born in this position, the occiput escaping from under one ramus pubis, the chin appearing under the other, (4) the occiput having rotated into the hollow of the sacrum (occipitosacral), delivery may occur in two ways (*a*) Flexion takes place, the root of the nose stems behind the pubis, and the occiput rolls over the perineum (more often it breaks through it), and (*b*) extension occurs, the forehead comes down and stems behind the pubis, and then the occiput comes out over the perineum, the mechanism resembling that of brow presentation In one of my cases complete extension, face presentation, occurred, the child coming out according to the usual face mechanism

Diagnostically we can determine which type of delivery will occur by searching for the large fontanel With flexion, this is high up behind the pubis, with extension, it is nearer the center of the pelvis In many instances the caput succedaneum covers up the sutures and fontanels, here one has an infallible guide, one that is not often enough consulted Search for the ear, the tragus always tells you where the face is

An essential part of the diagnosis is the discovery of the cause of the occiput being and persisting posterior, and of the contributing agents of the dystocia One may find a contracted pelvis, a fibroid, stenosis of the cervix or vagina, old primiparity with contraction rings in the uterus, a mammoth child, or some other condition which may require a cesarean section as a primary indication In consultation practice, one is often astonished to observe how this fundamental principle of obstetric diagnosis—a careful examination and consideration of all the factors necessary for judgment—is neglected

TREATMENT

In practice, one finds two classes of cases first, those in which the head is engaged, and second, when the head is in or above the inlet We occasionally meet one in which the head is arrested in the second parallel plane of Hodge, but we treat it as if the head were not engaged

When the head is high, floating, interference is not necessary, but a careful search should be made for any condition that may demand treatment for its own sake Watchful expectancy is the course to pursue Rupture of the membranes should be prevented, if possible, because labor is more often retarded than hastened by it The woman should lie on the side to which the occiput points, this is supposed to favor flexion, engagement and rotation Morphin and scopolamin are used in the first stage to prevent exhaustion of the mother and child, but it is not wise to let the labor drag on too much By means of a colpeurynter the dilatation of the cervix may be completed and the case thus prepared for interference if required After complete dilatation of the cervix, I usually wait an hour or two to see whether or not the head will engage If it does not, the membranes are punctured—the patient being on her side, to prevent prolapse of the cord If the head does not engage very soon, two courses of procedure are open version, followed by extraction if need be, and manual correction of the position In multiparas there is little choice, and individual preference may be exercised

Under deep anesthesia the whole hand is passed into the uterus, pushing the head up and out of the pelvis if necessary That hand is selected which will have its palm directed toward the face of the infant The posterior shoulder of the child is sought and with the tips of the fingers is swung around to the front, past the promontory of the sacrum The head, fitting into the palm of the hand, goes with the trunk When the inside hand is leading the occiput into the pelvis in its new position, the outside hand forces the head down by pressure on the occiput, which is now to be felt over the pubic ramus It may be advisable to draw the head down deep into the pelvis with forceps, await from four to six labor pains, remove the forceps, and leave the case to nature, or to follow a later indication The latter plan is especially successful in primiparas, because the molding of the head and the softening of the tissues produced by a few hours' labor and the progress of the head toward the outlet immensely facilitate the subsequent delivery In rare instances the manipulation fails because the child is held immovably in the anomalous position or because the cord prolapses, or the placenta may be in the lower uterine segment and compromised, or perhaps one discovers, even at this late time, a contracted pelvis, an overgrown child, an over rigid cervicovaginal canal Unless the asepsis of the case has been botched, it is not too late to perform a suprasymphyseal cervical cesarean section These are rare cases, usually it is possible to rotate the child, and bring the head into the pelvis A warning must be urged against the use of forceps in these high head cases If descent rotation and extraction are forcibly effected by forceps, the child is always injured, often killed, and the mother likewise maltreated This is one of the commonest causes of stillbirth and puerperal infection

After the head is engaged, the case is gratifyingly simplified If the cervix is fully dilated and the pains good, a little pressure upward on the forehead during a pain may aid flexion and favor rotation (Hodge's maneuver) Two fingers placed alongside the forehead on the anterior lateral inclined plane of Hodge may

direct the forehead backward, or one may try to draw the occiput forward with three fingers, as Tarnier suggested If these simple procedures and the consequential lying on the side of the occiput do not show results, or if rectal examination shows that the occiput has rotated to the sacrum, the patient should be etherized, and the head rotated to the proper position by combined internal and external manipulation Contrary to what is usually taught, this is not usually difficult, the trouble has been to hold the head in its new position long enough to apply the forceps As soon as the fingers are off the head, it rotates back again to where it was We can prevent this by the simplest of means After rotation has been accomplished, the scalp is grasped firmly with a double vulsellum or 8 inch artery clamp, and an assistant holds the head in proper position until the forceps can be applied I have performed this operation so often and always successfully that I can heartily recommend it for general practice With care, of course, and gentleness, it does no harm The little wounds are touched with tincture of iodin after delivery Even when the head is not engaged I have succeeded in rotating and holding it in position with the vulsellum, but it is best to first effect the rotation by hand, and then apply the vulsellum (In face presentation the occiput may be pulled down with vulsella for a typical application of the forceps)

Since adopting this simple and harmless method I have discarded Scanzoni's maneuver, and I have not found it needful to deliver a case with the occiput posterior

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NONINTERFERENCE IN THE TREATMENT OF PUERPERAL AND POST-ABORTAL INFECTIONS *

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The discussion of the policy of noninterference in the treatment of puerperal and postabortal infections before the section may appear to be simply a useless repetition of well known facts But a fairly extensive experience has shown us that, in spite of the conservative lines of treatment long advocated by practically all obstetricians and gynecologists, meddlesome and dangerous (though apparently minor) operations are still too frequently advocated in cases representing the various types of puerperal infection In checking over our own results in the obstetric service of Dr C Jeff Miller at the Charity Hospital, we have been impressed with the fact that in two cases the fatal outcome has apparently followed injudicious interference, hence, with increasing experience, we are becoming more and more conservative

The treatment employed by us is not revolutionary, and may be thus outlined, with variations to suit the individual case

A special ward is set aside for the handling of all white patients suffering from puerperal infections, this ward is also employed for the medical treatment of all other complications of pregnancy and the puerperium It is in reality a "rest ward," since no patient requiring a major operation is admitted to it On admission, a careful, general, aseptic bimanual examination is made, at the same time a culture is taken from the uterine cavity with a Little's tube if the cervix is sufficiently patulous, if firmly closed, this step is eliminated, as dilatation would of course entail a certain amount of traumatism If retained placental tissue is presenting through the partially dilated cervix, it is gently removed with the finger or with the ovum forceps, no other local manipulation, in or out of the uterus, is performed The patient is put to bed, the head of the bed being elevated if the infection is of recent origin and appears rather virulent The object of this is to facilitate drainage and, if possible, to limit the infection to the pelvis We are not sure that this posture helps us to attain these results, but are under the impression that the patients are benefited by a few days of the Fowler position at the beginning of the treatment

Hyperpyrexia is controlled by hydrotherapy, mild fever requires no treatment Fluids (chiefly water) are supplied plentifully—by mouth if tolerated, by rectum, when indicated, and at times by hypodermoclysis or intravenous saline infusion In a few cases we have transfused, but have not as yet been able to see that we have thereby improved our results The patients are nourished freely on soft or semisolid food, the only contraindications being vomiting and peritonitis The bowels are kept open by enemas saline laxatives being used only occasionally, in the infrequent cases of nausea without peritoneal involvement, small doses of calomel are sometimes given In cases of pelvic cellulitis or pelvic peritonitis, we apply a light ice bag to the hypogastrium, when the acute local symptoms have subsided in these cases we begin the employment of copious douches of plain hot water twice daily It may be weeks before the patient is considered ready for this part of the treatment

Drugs are secondary to the general supportive measures We have found the various tonics and stimulants, including alcoholics, to be of no assistance, often they are detrimental in that they are prone to disturb the patient's digestion Sleep is induced, when necessary by bromids or barbital Opiates are studiously avoided, being used only when other measures fail to relieve pain or to procure the needed sleep The usual laboratory studies are made, and we are especially careful to examine the blood for malaria, and the stools, in suspicious cases, for ova uncinaria, two fairly common infections in out-of-town patients A blood culture is taken every day for four days, as we often find it necessary to take three or four before a positive culture is obtained In cases of streptococcic bacteremia we have tried the serum treatment, but with negative results As soon as the patient begins to improve and can be moved, she is carried to the sun porch daily for a few hours of fresh air treatment

In brief, the patient is given a general supportive treatment and the pelvis is left severely alone after the preliminary examination We know that in practically all cases there is an endometritis, but we are sure that local treatment of the endometrium does more harm than good In cases of septic abortion with retention of placental tissue, we are sometimes forced

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to sponge the uterus out carefully on account of hemorrhage, even this gentle procedure often causes a rise of temperature In the cellulitis cases, we make vaginal examinations occasionally if the abnormal temperature persists, in order to discover accessible pus-foci, if any develop In blood stream infections, without local pelvic exudate, we as as rule make no further local examination until the patient is ready for discharge

The treatment of septic abortion with retention of placental fragments is by no means settled as yet, the measures advocated by various authorities ranging all the way from curettage to absolute local noninterference Experience with the various methods has taught us that the best results are obtained in these cases by letting the uterus alone until the temperature is normal and the uterine culture becomes negative The only exceptions are (1) patients in whom placental tissue appears through the open cervix, or (2) patients suffering from profuse bleeding due to the retained fragments However, in several cases in which there are general symptoms of moderate severity and very foul discharge we have seen the condition improve rapidly and the fever disappear quickly after removal of the retained tissue with the ovum forceps or the finger, on the other hand, other patients have developed very severe bacteremias after the same procedure Of course, the difference is due to the variations in the bacterial flora of the uteri of the different patients, so that the safer method is to follow the advice of Polak and await the report on the culture before deciding on the treatment to be followed Many of these cases will complete themselves, in the others, small doses of pituitary extract may be given and they can be completed when the bacteriologic report indicates that it is safe to do so We agree with Polak that many of these patients will need a curettage later, on account of the menorrhagia due to endometrial changes consequent on this retention

We have treated sixty cases of severe infections following abortion or full term labor, and several times this number of mild infections, with fever for only two or three days They fall into the usual categories I will first consider those under the heading of blood stream infections, with no local pathologic condition of the pelvis except the usual endometritis Thirty-three of these have been cared for, sixteen following full term delivery (most of which were either instrumental or midwife cases), and seventeen consequent on abortion, with the usual history of local interference Of the sixteen in the first group, five patients died, two of these, however, were hopeless on admission, and soon died, so that the mortality would be more correctly stated as three out of fourteen Of the seventeen in the second group, three died, showing either that the infections were not as severe, or (what is more likely) that women seek hospital care more readily after abortion, probably in search of the curettage that they are told should be performed

Of the cases presenting a local pathologic condition of the pelvis, we have treated twenty-three classified under the heading of pelvic cellulitis As these patients practically all present various degrees of pelvic peritonitis, we find it difficult clinically to draw a sharp line of demarcation between these two groups nor is it important to do so, as the treatment is the same for the two types Of these twenty-three, six patients were ultimately operated on In four cases, the operation consisted of drainage of pus pockets, which developed late, and were opened weeks after admission Two of these were abscesses of the uterine wall, which were drained by laparotomy, two others were broad ligament abscesses which were opened by incision above Poupart's ligament All these patients recovered The other two operations were not so sharply indicated, and represent errors of judgment In one case, the patient had a rather stormy time, with persistent septic temperature One of the staff thought that a pus pocket had developed, so he performed a posterior colpotomy on the twenty-ninth day No pus was found The patient died two days later with the symptoms of general peritonitis The other patient was operated on eleven weeks after full term normal delivery, her temperature had been normal for three weeks, and all of the exudate had disappeared with the exception of a small right tubo-ovarian mass Thinking that the pus (if any) was surely sterile by this time, we operated on her, and easily removed a pus tube and an abscessed ovary She died forty-eight hours later of general peritonitis I believe that these two would have ultimately recovered, had it not been for our interference

Our experience with fulminant, rapidly spreading general peritonitis has been unfortunate, which is the usual story Four cases have been treated, one by laparotomy, drainage, and enterostomy, the other patients were not operated on, but were treated as outlined above All four died

We have found that the treatment of cases of abortion, both complete and incomplete, along the same lines, is productive of very gratifying results One hundred and twenty-one complete abortions have been cared for, twenty-five of these patients had fever of a mild type, the others were afebrile Many of them were admitted as cases of incomplete abortion and completed themselves spontaneously in the ward under expectant treatment One hundred and forty-five incomplete abortions have been treated, in which nonoperative methods failed to bring about complete evacuation of the uterus It was necessary to clean out the uterus in these cases, because of persistent bleeding, this was done in 102 patients by means of the ovum forceps or the finger, in forty-three, by the use of the dull curet In the first group, there were thirty-six with mild fever at the time of removal of the retained secudines, in seventeen of these the temperature promptly dropped to normal, while in nineteen it remained elevated Sixty-six patients had no fever prior to this little operation, thirteen of these developed a rise of temperature, and two of them were very ill In the second group (curet) eight had fever before and after curettage, thirty-five with no fever were curetted, and three of them developed a mild rise of temperature after the operation All of these 266 patients were discharged as cured We have learned, however, that the gentlest of intrauterine manipulation will at times light up an infection

Summing up the immediate results, then, we have thirty-three severe cases of blood stream infection with eight deaths, two of these patients being moribund on admission, twenty-three cases of pelvic cellulitis, in seventeen of which the exudate disappeared completely, in four more drainage of abscesses

developing late completed the cure, while in two cases injudicious operation resulted fatally, four cases of fulminant peritonitis, with four deaths, and lastly, 266 cases of abortion, complete and incomplete (eighty-six of these patients had slight fever for a few days), all of whom were discharged as cured We have not been able to follow up all these patients after discharge, but the ones with whom we have afterward come in contact have been found to be in good health and to have no pelvic symptoms Some of them have since passed through normal pregnancies and labors None of them have subsequently been admitted to our gynecologic service for operation because of tubal or ovarian infection, and few, if any, have returned to the other gynecologic wards of the hospital When we consider that about 50 per cent of the cases of salpingitis in which we operate are traceable to abortion followed by some form of active local treatment (and this is our experience), we feel that the improved results, both immediate and remote, justify us in regarding the policy of noninterference as the method of choice in handing the types of infection under discussion

NOTE—Since the reading of this paper I have been asked whether we employ the same treatment in cases of pelvic abscess Of course we drain these foci as soon as we are sure that a localized collection of pus is present The point I wish to make is that we obtain the best results by abstaining from the use of the curet the intra-uterine douche and all other forms of active local treatment in cases of puerperal infection, generalized in the blood stream or localized in the pelvis the sole exception being the drainage of accessible pus collections as soon as they develop I wish to stress noninterference in all cases without localized abscess

ABSTRACT OF DISCUSSION

DR JOHN O POLAK, Brooklyn The general principles that the doctor has laid down are supported by my experience in several thousand cases of sepsis treated on very much the same lines as he suggested He seemed a little in doubt as to what the Fowler position did in these cases Our necropsy experience has shown certain things In the first place, all these infections either come through the endometrium, through the inoculation of the wound in the cervix, or inoculation of the placental site Consequently, in the majority of instances, we are dealing with an endometritis and that is taken care of usually by Nature s protective leukocyte wall If the bacteria are very virulent they will penetrate that wall, however enter the lymphatics and cause a parametritis, or a parametritis with a periadenitis If the uterus is in its proper position, it drains and rids itself of a certain amount of toxicosis By turning the patient over on her abdomen from time to time the vagina will drain also When the patient is placed in the Fowler position, the sigmoid drops down over the uterus and the omentum comes down and protects In these cases we found one thing constantly at the necrosy—the pelvis had been more or less completely sealed by the sigmoid loop and by the omentum so that a general peritonitis had been converted into a local one by posture I have also seen this at the operating table This is also true in the puerperal case where the uterus is outside of the pelvis and blocks the pelvis by a ball valve action Consequently the extension is more liable to take place to the peritoneum We have been treating the bacteremias on the general plan the doctor suggested—fresh air, fluids by rectum underneath the skin and by mouth These patients get practically no other treatment We have found of value the injection of 250 c.c. of citrated blood every four or five days The first reaction is an increase in the leukocytes That increase and also the improvement in the red blood cells disappear very promptly but after the second injection there is a greater general improvement in the blood pressure the resistance of the patient and her appearance The third time she holds all that you may give and makes a fair recovery I am pleased with the results of repeated blood transfusions in these cases of pure bacteremia

DR EDWARD L KING, New Orleans I am glad to find that the Fowler position does do good We thought it did but never held a necropsy in these cases because we could not get it The two cases that I mentioned were not the type that would show anything about the value of the Fowler position We have not tried the repeated transfusions We have tried giving 500 or 600 c.c. at one time in several cases and found that it did not seem to help much

CYSTS OF THE PANCREAS*

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True cysts of the pancreas are due to an obstruction of the outflow of the secretion, with a retention of the fluid and dilatation of the ducts or acini (retention cysts) or they occur when spontaneous proliferation of epithelial elements of the gland is followed by accumulation of fluid in cavities that are formed (cystic tumors) [1]

The latter cysts are called proliferation cysts, and include cystic adenoma and cystic carcinoma Hydatid cysts occur rarely in the pancreas Tricomi states that seven cases have been recorded Of congenital cystic disease a few cases have been recorded by Pye-Smith [2] Richardson Shattuck and others

Hemorrhagic cysts of the pancreas occurred following trauma in which bleeding took place into the substance of the pancreas [3] The presence of blood in the cystic contents does not establish a hemorrhagic origin to the cyst as the blood may be present as the result of erosion of the vessels due to action of the cystic fluid

Korte has applied the term "pseudocyst" to those cysts in relation with the pancreas but which are not of pancreatic origin The inclusion of these tumors within the term "pancreatic" is clinical and due in large part to the difficulty of establishing at operation, the pancreatic origin of these cysts Perhaps the greater number of cysts in relation with the pancreas that are encountered by the surgeon, and that have been reported in the literature as pancreatic cysts, are those cysts due to contusion of the upper abdomen with accumulation of fluid in the lesser peritoneal cavity and which belong to the pseudocysts

Virchow himself stated that he was unable to determine the origin of a large cyst attached to both the pancreas and the stomach Records of postmortem examinations in cases of cysts of the pancreas are not numerous

Retention cysts of the pancreas have been described by Virchow [4] as being of two forms In one the whole duct is dilated with the occurrence of a "rosary-like" dilatation which he called "ranula pancreatica" In the other group the duct is obstructed at its outlet and becomes distended into a cyst which may become the size of one s fist and may contain mucoid, hemor-

* Read before the Section on Obstetrics Gynecology and Abdominal Surgery at the Seventy First Annual Session of the American Medical Association New Orleans April 19–0

1 Opie E L. Disease of the Pancreas Philadelphia J B Lippincott Company 1910

2 Pye Smith J H Tr Path Soc London 1885 p 1

3 Kuhnast Schroder Friedrich and Hagenbach cited by Opie (Footnote 1)

4 Virchow Die Krankheiten Geschwulste 1 276 1863

rhagic or calculous matter. The causes of retention cysts are (1) the impaction of a calculus or calculi, (2) cicatricial stenosis, (3) pressure on the duct from without, or (4) a dislocation of a part of the gland (Moynihan). Klebs[5] has applied the name "acne pancreatica" to numerous small dilatations of the minute ducts.

The late Nicholas Senn made the statement that a cyst of the pancreas could not occur as the result of an obstruction to the pancreatic duct in the normal pancreas. Ligation of the ducts of Wirsung and Santorini in dogs did not produce a pancreatic cyst, but, as Opie has pointed out, this does not apply to the actual conditions in man for the reason that there are things about cyst formation in the pancreas that we do not understand.

Proliferation cysts arise as true tumors.[6] Fitz[7] collected nine instances of proliferation cysts. Eight of these occurred in women. Cystic tumors of the pancreas have rarely been malignant.[8]

According to Opie, the formation of cysts which do not occur in other glands is doubtless dependent on particular properties of the pancreatic juice, and their contents are in part at least products of the pancreatic secretion. Ligation of the pancreatic ducts in animals causes chronic inflammation of the gland with little dilatation of the ducts behind. The occlusion of the pancreatic ducts by tumor, gallstones, or pancreatic calculi is usually unaccompanied by cyst formation, but occasionally multiple cysts result. Occasionally, cysts of large size have been associated with gallstones lodged near the orifice of the pancreatic duct.[9] Chronic pancreatitis has been regarded by Tilger[9] as an important factor in the production of pancreatic cysts, for he has thought that scarlike bands of connective tissue compress and occluded the ducts. Chronic pancreatitis, on the contrary, may also be secondary to the cyst formation, for example, by compression of neighboring ducts, cysts cause chronic inflammation. Occlusion of ducts which may be either the cause or the result of cyst formation, is always followed by interlobular pancreatitis, and when this lesion implicates the entire gland and is far advanced, diabetes mellitus ensues.[1]

Pseudocysts, so called, may be formed within the substance of the pancreas as the result of degenerative changes affecting the interstitial tissue of the gland, and their formation and increase in size is doubtless dependent largely on the presence of the irritant and corrosive products of the pancreatic secretion. A large number of the so-called pancreatic cysts occupy the lesser peritoneal cavity.

Of 121 instances collected by Korte, sixty were in males, fifty-six were in females, and no sex given in the remaining five. The youngest was in a child 13 months old (Shattuck). Stieda operated on a man 76 years old. The cystic tumor may be situated at any part of the gland. In twenty-two instances collected by Hagenback, the cyst had its origin in the head four times, once in the body, ten times in the tail, and in seven the site is not given. Nimier, according to Moynihan, reports its occurrence twenty-one times in the tail, six times on the body, four times in the head, once in the head and body, and once the whole organ was implicated.

Cysts may be single or multiple, unilocular or multilocular. Two cysts may be simultaneously observed of almost equal size, or, after the healing of the cyst a second may develop in a distant portion of the gland and necessitate further operation. One small cyst may be found with a large number of smaller cysts packed in the walls (Moynihan).

The cysts are generally smooth and rounded, elastic and rather tense. In the early stages true pancreatic cysts are usually lined by a single layer of flattened, cylindric epithelium, which frequently disappears in the long standing cysts, owing to the action of the cystic contents. Pseudocysts are never lined by epithelium. Their walls are always composed of fibrous connective tissue. In a case reported by McPhedran[10] a pseudocyst and a true cyst of the pancreas occurred.

CONTENTS

The character of the fluid within the pancreatic cyst varies greatly. It may be clear, milky, brownish red or nearly black. It is nearly always albuminous, but frequently furnishes little evidence concerning the origin of the lesion. The contents of the pancreatic cysts are occasionally viscid, and the presence of mucin has been demonstrated. Microscopic examination usually reveals the presence of epithelial cells, globules of fat, crystals of fatty acid, red blood cells, leukocytes and necrotic tissue.[1] It is often possible to demonstrate one of the three well known enzymes of the pancreatic juice in the contents of pancreatic cysts but proteolytic, lipolytic and diastatic enzymes have been found in the fluid removed from abdominal cysts which have not had their origin in the pancreas. Korte has found a weak diastatic enzyme in a mesenteric cyst. The presence of polymorphonuclear leukocytes may give proteolytic activities to any fluid that contains them, whereas the wide distribution of fat-splitting enzymes is well known. Moreover the contents of true cysts of the pancreas may exhibit no enzymatic activity. Antitryptic action of the blood serum may explain the absence of trypsin in hemorrhagic cysts and Heidenhain[11] has shown that enzymes disappear in the secretion of chronic inflammation of the gland. An examination of the fluid present is not always conclusive in establishing the pancreatic origin of the cyst. Nevertheless, if an abdominal cyst contains fluid capable of digesting coagulated egg albumin or of splitting starch, its origin in the pancreas is probable.

SYMPTOMATOLOGY

The early symptoms of pancreatic cyst are usually trivial, and are chiefly those due to interference by pressure with the surrounding viscera. The patient complains of a distress or a sense of fulness, especially after eating. Pain varies greatly and in some cases is of little diagnostic value. However, in some cases the attacks of pain occur periodically, are of a cramplike character, and suggest the presence of gallstones, indeed, in one case,[9] a diagnosis of gallstone had been made by several physicians who had examined the same patient. The pain is generally confined to the upper abdomen, and may extend around to the left side or through to the back. Nausea and vomiting occur occasionally. They are not common, and when vomiting does occur it is usually due to adhesions between the stomach and the cyst wall. It may recur periodically and be quite severe. The bowels are fre-

5 Klebs: Handbuch der pathologischen anatomie, Berlin, 1868, 1, 552.
6 Opie: Disease of the Pancreas, p. 268.
7 Fitz: Tr. Assn. Am. Phys. 15, 254, 1900.
8 Horrocks and Morton (Lancet, 1, 242, 1897) and others.
9 Tilger: Virchows Arch. f. path. Anat. 137, 348, 1894.
10 McPhedran: Brit. M. J. 1, 1400, 1897.
11 Heidenhain: Arch. f. d. ges. Physiol. (Pflüger's), 10, 557, 1875.

quently constipated, but occasionally diarrhea occurs The patient may complain of weakness, and frequently there is a considerable loss of weight Patients have lost as much as 20 pounds or more during a period of several months In other cases the loss of weight was so great as to arouse a suspicion of the presence of malignancy The appetite is variable Jaundice is only rarely present Korte found it recorded in only nine cases out of 121, the jaundice being due to pressure on the common duct by cysts of large size which are almost always situated in the head or neck of the pancreas Dilatation of the superficial branches of the portal vein have been recorded in a few instances Ascites and edema of the lower extremities have occurred in two cases, as did obstruction of the right ureter in two patients [12] Steatorrhea or disturbance of the protein digestion is rare [7] Diabetes occurred in nine instances out of 136 collected by Ozer Lazarus mentions one case of alimentary glycosuria Occult blood may in some cases be present in the gastric contents or in the feces, or in both

PHYSICAL EXAMINATION

Cysts of the pancreas are usually spherical, smooth and tense In a series of cases reported by Korte, that author found forty-eight in the median line of the abdomen between the ensiform cartilage and the umbilicus Forty of these were to the left of the median line, and eight were on the right side In a great majority of cases, cysts bulge between the stomach and the transverse colon The cyst may push itself above the stomach or between the stomach and the liver This is especially likely to occur when the cyst arises from the upper border of the pancreas Cases have been reported by Riedel and others in which the transverse colon was pushed down as low as the symphysis pubis If the cyst arises from the lower border of the pancreas, the transverse colon may run directly across the cyst or the cyst may, as it frequently does, project below the transverse colon with a bulging of the transverse mesocolon Schwartz [13] reported a case in which the cecum was in front of the cyst, and Martin a case in which the descending colon was overlying the cyst This also occurred in the case I report Dreyzehner [14] has described a case in which the cyst arising from the head of the pancreas grew to the right and lay behind the peritoneum, displacing the right kidney Da Costa [15] mentions a case of pancreatic cyst which appeared in the right flank and which resembled a hydronephrosis McPhedran [16] says that cysts of quadrilateral shape in the region of the pancreas and extending toward the left kidney are likely to be of pancreatic origin

Cysts of the pancreas usually possess little motility, since that organ is fixed in its position and behind the peritoneum However, cysts when attached to the tail of the pancreas in some cases may be moved about freely

In one case reported by Lazarus the cyst could be moved from the left hypochondrium to the right mammillary line Cysts in contact with the diaphragm usually possess respiratory motility Cysts in contact with the aorta may transmit pulsation which is not expansile and which can be differentiated from aneurysm of the abdominal aorta by placing the patient in the knee-chest position, when there will be no pulsation Inflation of the stomach and colon will aid one in determining the relationship of the cyst to the surrounding viscera Collections of fluid in the lesser peritoneal cavity usually form very rapidly Mesenteric cysts are usually in the region of the umbilicus

In the case here reported the duct opening into the cyst was found and closed by a purse-string suture

REPORT OF CASE

History—A man aged 20, born in the United States a baker, referred to me by Dr W H Kelly of Philadelphia sent to the Medico-Chirurgical Hospital, where I operated on him Aug 20, 1913 had had the usual diseases of childhood measles and chickenpox The history otherwise was negative There was no history of syphilis The family history was negative For the last four months he had noticed a swelling in the left side of the abdomen which had gradually been getting larger He also complained of some soreness and pain across the upper abdomen Recently he complained of weakness and inability to work which along with baking consisted of handling barrels of flour His appetite was good and his bowels were regular He also had lost about 10 pounds in weight during the previous three months He had never been jaundiced

Physical Examination—The patient was of medium height with good color and fair nutrition Examination of the eyes was negative The condition of the teeth mouth pharynx and nose was good The chest was normal the lungs and heart negative There was a tumor-like swelling to the left of the middle line of the abdomen extending from the epigastric and umbilical regions to the left hypochondria and left lumbar regions There were in reality two tumor masses The mass near the median line was about the size of a fist the other and lateral swelling was separated from the median mass by a slight abdominal recession and it was about the size of a hen's egg and located in the region of the lower pole and inner side of the left kidney The outlines of both masses were regular fairly well circumscribed smooth elastic and only slightly tender to the palpating hand There was not any respiratory mobility, between the two tumor masses was a narrow tympanitic area that I believed to be the descending colon This view proved to be correct by colonic inflation The percussion wave was transmitted from one mass to the other Examinations of the urine and feces were negative The transverse colon was above the mass

Blood Examination Hemoglobin (Sahli) was 82 per cent, red blood corpuscles numbered 4,200 000, white blood corpuscles 8 000

Gastric Contents After an Ewald test breakfast total acidity was 40 free hydrochloric acid 16 Motility was normal There was no occult blood

Operation and Result—Under ether anesthesia an incision was made through the sheath of the left rectus muscle and the lower layer of the transverse mesocolon was torn through exposing the cyst wall The cyst was drawn up a trocar was introduced and the contents of the cyst were withdrawn I then enlarged the cyst opening with a pair of scissors and sponged away the remaining fluid I found a small opening in the wall of the cyst leading to the cyst cavity this was the opening of one of the radicles of the pancreatic duct With a small curved needle armed with linen thread I introduced a purse string suture which when tied closed the aperture I then stitched the wall of the cyst to the parietal peritoneum and lightly packed the cyst cavity with gauze which was removed on the third day The patient made an uninterrupted recovery He stated that prior to the onset of his trouble he thought that in handling barrels of flour he had strained himself on one occasion The cystic fluid was a clear viscid coagulated egg albumin and converted starch into sugar

Rupture of pancreatic cysts due to a fall or trauma over the abdomen have been reported by Schwartz Bull [17] and others The disappearance of the cyst in

12 Dreyzehner and Reve Ann Surg 18 227 1893
13 Schwartz Sem Med 13 281 1893
14 Dreyzehner Arch f klin Chir 1 261 1895
15 Da Costa J C Modern Surgery 1910 p 1162
16 Schwartz Sem cited 13 [illegible]
17 Bull New York M J 41 [illegible]

both instances was associated with diarrhea The inference is that the cyst ruptured into the intestine

TREATMENT

The treatment consists of (1) evacuation and drainage, the cyst being stitched to the abdominal wall (Gussenbauer's method), (2) exposure of the cyst and operation in two stages, i e, by the insertion of gauze until adhesions have formed, and subsequent opening of the cyst at the expiration of three or more days, and (3) extirpation, partial or complete

Evacuation and drainage is thus performed The abdomen is opened either to the right or to the left of the median line, depending on the location of the cyst The incision is made through the sheath of the rectus muscle The cyst wall is exposed by tearing through the omentum The cyst most frequently protrudes between the stomach and the transverse colon, being covered by the gastrocolic omentum Care should be taken to avoid large vessels, which are usually present A careful examination of the cyst is made to determine its source, the extent of adhesions and the condition of the pancreas, together with the relation of the cyst to the surrounding structures The most prominent part of the cyst is brought into the wound, and gauze sponges are placed so as to protect the peritoneal cavity and the abdominal wall from being soiled An aspirator needle or trocar is thrust into the cyst, and its contents are evacuated into a sterile container for future examination On withdrawal of the aspirator a clamp is placed on the opening of the sac The sac wall is now united by a continuous suture to the parietal peritoneum by using a curved needle threaded with catgut, silk or Pagenstecher thread The forceps are then removed from the cyst opening and a piece of large rubber tubing is introduced into the cyst cavity, where it is fixed by an anchor stitch to the cyst opening, and the cyst wall is closed around the rubber tubing by the use of purse-string sutures

The two stage operation has not been used very frequently during recent years

Some surgeons drain cysts of the body and tail of the pancreas by making an incision in the left lumbar region at the border of the erector spinae muscle and its junction with the last rib The lumbar fascia is divided, with the finger one pushes the descending colon forward, the cyst wall is reached, incised, and drainage is inserted In the event that one has not made a positive diagnosis, the incision through the abdominal wall is preferable Some surgeons, after operating through the abdominal wall have evacuated the cyst and, establishing drainage, have made a counter opening through the loin It seems to me that the single operation of drainage anteriorly is sufficient It may be necessary to resort to the two stage operation in some instances in which either through the size of the cyst, or its location the stitching of the cyst wall to the abdominal wall may offer considerable difficulty Under the circumstances one may insert gauze packing, allowing it to remain for several days until sufficient adhesions shall have formed to protect the peritoneal cavity The cyst is then incised and drained

Extirpation, either partial or complete, has been performed by a number of surgeons In some cases it has been successful In other cases the procedure had to be abandoned owing to the character of the adhesions, the presence of large blood vessels, and the danger of wounding the splenic vessels In other cases it has been possible to ligate the pedicle (Clutton and others), divide it with the thermocautery (Kosinski) or clamp it with forceps (Pincet)

Aspiration, except in ascites, has no place in abdominal surgery Drainage in some cases may continue for a prolonged time

Under no circumstances is any solution to be injected into the cyst cavity, with the idea of causing cessation of secretion, for cases have been reported in which this procedure was attempted and it was followed by disastrous results

1934 Chestnut Street

ABSTRACT OF DISCUSSION

DR A C SCOTT, Temple Texas I wish to report a case of pancreatic cyst not quite the size of the average cocoanut It stood up rather prominently in the midline and appeared to be fairly movable, although it was very evident that it was attached posteriorly It had a little movement in response to the diaphragm We could take hold of it and move it from side to side two or three inches The top of the mass seemed to be freely movable We undertook the removal of this cyst Had we persisted in our efforts, the patient might have died Rather extensive bleeding occurred from almost every point from which we undertook to dissect the cyst from the pancreas proper, and the pancreatic tissues came up on the under side of it like part of a flower When we got through with it, it was like a bulb, with the pancreas coming half way up on its side In our efforts at stripping it loose on the under side, we accidentally tore a hole in the vena cava By pulling on the cyst and holding my thumb down, I could control the bleeding temporarily We closed the opening in the vein with silk sutures We succeeded in removing about two-thirds of the growth

DR MOSES BEHREND, Philadelphia Acute cases are operated on the first week Chronic pancreatic cysts may be considered those that have been in existence many months or years I have seen two cases of chronic pancreatic cysts, one a traumatic condition, the entire lesser peritoneal cavity being filled with the hemorrhagic fluid which seemed to come as the result of injury to the pancreas The other case was of undetermined origin, but probably resulted from an attack of acute hemorrhagic pancreatitis It is not necessary to remove these cysts If you do you will have the same trouble Doctor Scott had It is desirable to suture the cyst to the parietal peritoneum and pack with gauze The cavity will be obliterated by the irritation of the gauze packed into the cyst I want to caution you against removing the gauze too soon Leave it in at least eight days

DR MARCELL HARTWIG Los Angeles Cysts must be considered in an anatomic way, that is, whether or not they have an epithelial lining with glands If cysts have no epithelial lining, they will shrink with the simplest kind of an operation I puncture the cyst with a trocar at the point where the cyst and the abdominal wall touch, and then introduce a catheter In this way you can cure practically every cyst

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Bolted Versus Whole Wheat Flour—It is evident that in the milling of flours there comes a point where the law of diminishing returns begins to play, that is, there is a percentage at which the milled flour is the most efficient food deliverer That the flour must not be milled to too high a percentage is evident for the great cellulose content will not only hamper the digestion of the protein, but will interfere with the digestion of the carbohydrates In the case of the German flours during the war, especially when the one great problem of the diet was protein, the mistake of grinding out to 94 per cent is obvious Not only was the bread actually less efficient as a food, but by milling to a lower percentage the bran would have been used as a fodder, thus putting it to a useful purpose instead of allowing humans to eat it with no good to them, rather it did actual harm, in that it caused indirectly, a portion of the available protein to be lost—C C Mason *Bull Johns Hopkins Hosp*, March, 1920

TREATMENT OF DIABETES COMPLICATED BY PULMONARY TUBERCULOSIS *

N W JANNEY, PH D, M D
AND
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The question whether undernutrition is properly applicable to the treatment of diabetes complicated by active pulmonary tuberculosis is the theme of the present paper Interest in this problem has been enhanced by the general adoption of the Allen diabetic regimen during the last five years which emphasizes the opposed principles in the handling of these diseases, diabetes being treated by fasting, undernutrition and exercise, tuberculosis by maintaining normal nutrition and rest That the results obtained in general are discouraging is well indicated by the very paucity of the literature [1] on this subject, for physicians are loath to report their failures Through the establishment of a specially organized metabolic unit in southern California, excellent material and working conditions have been afforded for a study of this not uncommon pulmonary complication of diabetes, the results and deductions obtained being presented in this report In order to study properly the treatment of diabetes in the presence of tuberculosis, questions of etiology and mutual modifications of the clinical pictures of these diseases must first be regarded

ASSOCIATION OF DIABETES WITH PULMONARY TUBERCULOSIS

There seems to be no question of the rarity of the development of diabetes in patients exhibiting active tuberculous disease Montgomery, in his excellent study of this subject, obtained data from twenty-five tuberculosis sanatoriums in the United States reporting, among 31,834 cases of tuberculosis, 101 cases showing glycosuria, that is, ⅓ per cent, only ⅙ per cent exhibiting developed diabetic symptoms, whereas more than 1 per cent of our population develop diabetes [2] Indeed, Montgomery failed to find a single unquestionable case of diabetes developing in the presence of tuberculosis By this is probably meant active tuberculosis, as Joslin cites instances of diabetes developing in cases of latent or inactive tuberculosis Several of our cases give a history indicating activity before but not at the time of onset of the diabetes In one instance a clear history of this pulmonary affection was elicited occurring twenty years previously It is evident, then, that diabetes attacks less frequently the actively tuberculous subject than normal individuals The ultimate reasons for this are not entirely clear It may be noted, however, that diabetes is a disease frequently preceded by obesity and commonly also by dietetic excesses These conditions are rarely encountered in cases of tuberculosis in periods of pronounced activity, which causes loss of weight and decreased appetite Indeed, it would seem that undernutrition safeguards against the development of diabetes Again, the hygienic treatment of tuberculosis may tend to lessen emotional and nervous strain, which is an accepted etiologic factor in diabetes Metabolically considered, it is probable that the fuel and tissue replacement requirement in the tuberculous patient diverts to these channels protein and fat split products which otherwise through synthesis contribute to glucose formation in the body It is possible that increased fuel requirements may even decrease the carbohydrate available for excretion in the individual disposed to glycosuria

With regard to the frequency of tuberculosis among diabetics, the older statisticians report an incidence varying from 15 to 25 per cent Joslin, however in 1,146 cases, observed from 1894 until December, 1916, noted only 3 1 per cent as tuberculous which may probably be accounted for by the fact that his cases were chiefly private and lived under better hygienic conditions, and moreover, that treatment especially in the hands of this great student of diabetes, was improving during this period Apparently in the fatal cases of diabetes reported, phthisis is infrequent von Noorden finding 5 1 per cent, Montgomery 8 5 per cent, and Joslin in 439 cases (1894 until December, 1915) 3 6 per cent tuberculous But Naunyn, S West, R T Williamson and J Seegan in a total of 216 postmortems reported tuberculosis in from 40 to 50 per cent. of dead diabetics This discrepancy in frequency between the cases examined at necropsy and those not so examined is probably due to failure of recognition of phthisis in the presence of diabetes It is difficult, however, to demonstrate statistically that tuberculosis is more frequent among diabetics than even among the population at large for according to Rosenow, Baldwin and other authorities about one third of the total deaths of the entire population are due to pulmonary tuberculosis There will also be remembered the well known data of Naegele, who found tuberculous lesions in 90 per cent of a large number of necropsies In a total of twenty-one carefully studied recent cases, sixteen reported in the present paper and six from the Rockefeller Hospital,[3] diabetes preceded the active tuberculous outbreak in every case, except one of doubtful history

CLINICAL ASPECTS OF DIABETES ASSOCIATED WITH PULMONARY TUBERCULOSIS

All grades of diabetes may be found among glycosurics developing tuberculosis Of our series, nine cases were mild, four moderate, and three severe There is little question that rapidly progressive tuberculosis, especially when accompanied by febrile reaction, may definitely lead to increase of food and glucose tolerance in the diabetic In Case 10, sugar appeared in the urine on a diet of 17 calories per kilogram and 20 gm of carbohydrates The same patient, after developing acute caseous tuberculosis, was able to take 30 calories per kilogram and 30 gm of carbohydrates without glycosuria or ketonuria, blood sugar at times ranging as low as previously (Chart 3) It is interesting that our series of diabetics with pulmonary lesions rarely showed dangerous acidosis symptoms, although 25 per cent were low tolerance cases The same factors (as already mentioned) which make the incidence of diabetes in active tuberculosis a medical rarity no doubt play a protective role with regard to acidosis when both di-

* From the Memorial Metabolic Clinic
* Read before the Section on Practice of Medicine at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Shively H L New York M J 87 933 (May 16) 1908 Montgomery C M Am J M Sc 144 543 (Oct) 1912 Landis H R Junk E H and Montgomery C M Am Rev Tuberc 2 690 (Jan) 1919 Montgomery s articles are particularly exhaustive with full references to the older literature

2 Joslin, E P Treatment of Diabetes Mellitus, 1917 p 24

3 Allen F M Stillman E and Fitz R Monograph 1 Rockefeller Inst Med Research Oct 15 1919

eases have developed The blood sugar of phthisical diabetics runs no higher than in uncomplicated diabetes We have found it, however, much more difficult to reduce to the normal by diabetic treatment This tendency is likewise observed among glycosurics exhibiting other infections Of our seven fatal cases, two of the patients died in diabetic coma In one the phthisis was readily controlled by rest and diabetic treatment, but the diabetes was severe, the fatal outcome being induced by gross dietetic indiscretions The other case was too complicated to permit of conclusions It is our clinical impression that, on accumulation of statistics, severe acidosis will be found to develop rarely in the presence of active tuberculosis

CLINICAL ASPECTS OF TUBERCULOSIS ASSOCIATED WITH DIABETES

A very important question is whether the pulmonary process usually begins to show activity in the untreated or the treated diabetic condition Table 2 shows that in sixteen cases, only five of the patients developed tuberculosis while sugar-free Only one of these five was at this time living on a diet of less than 30 calories per kilogram Of the ten patients developing the pulmonary infection while showing sugar, seven were on unrestricted diet There is, then, excellent evidence indicating that the tuberculous outbreak occurs more often in the diabetic showing sugar and carelessly treated than among strictly treated patients living

TABLE 1—ANALYSIS OF SIXTEEN CASES OF DIABETES ASSOCIATED WITH PULMONARY TUBERCULOSIS

Case Number	Age at Entrance	Family History Diabetes Tuberculosis with Exposure	Diabetes: Age at Onset	Diabetes: Type Severe +++ Moderate ++ Mild +	Diabetes: Treatment Good ++ Poor + Neglected 0	Age at Onset or Discovery of Tuberculous Activity	Condition on Admission: Urine Sugar, Gm	Urine Ketonuria	Blood Plasma Sugar CO per 10 000	Blood Plasma Sugar per Cent by Volume	Complications	Treatment: Bed Rest	Fasting Used	Diet, Weeks Cal per Kg: Less than 15	15 to 30	Over 30
1	45	T B, D	42	+	+	45†	8	+	20	50	Gout nephritis severe influenza	+	Yes	1	0	9
2	33	0	28	+	+	32	66	0			0	0	Yes	0	8	5
3	67	0	61	+	+	67†	1	0	19	56	0	+	No	2	2	2
4	51	T B D	41	+++	+	51†	0	0	10		Arterio clerosis	0	No	0	3	13
5	37	D	31	+	0	36†	6	+	15	54	Alcoholism chronic nephritis	+	No	8	2	
6	49	D	48	+	+	48†	4	0	25	72	Hemochromato is	0	Yes	0	1	2
7	61	0	58	+++	+	61*	41	+++	8	28	Arteriosclerosis	In part	Yes	4	4	
8	27	T B	26	+++	0	27	21	+++	43	47	0	+	Yes	4	1	
							62	+++		40		+	No	2	1	
							8	+	48	49		+	No	1	5	
9	29	0	23	+	++	28	286	++	31	50	0	+	No	1		
10	50	0	49	++	+	50†	0	+	13		Pleurisy (tuberculous)	+	No	1	7	4
11	30	0	34	++	+	3	67	0	26		0	+	No	0	2	1
12	63	0	41	+	0	60	29	0	24	65	Arteriosclerosis	+	No	0	2	3
13	42	0	23	+	0	40	25	+	20	53	0	+	No	1	1	
14	2	0	29	++	+	3	6	+	8	55	0	+	No	1	7	
15	48	D	40	+	++	48	12	0	37	59	0	+	No	1	4	
16	37	0	35	++	++	36	40	0	29	58	Pleurisy (tuberculous)	+	No	0	1	1

RESULTS

Diabetes: Days before Sugar Free	Diabetes: Days before Ketone Free	Diabetes: Blood Sugar Reduced to	Signs and Symptoms Before and After Hospital Treatment + present 0 absent I improved U unchanged W worse:	Emaciation	Weakness	Cough	Bacilli	Temperature	Pulse	Lung Pathology	Weeks in Hospital	General Results of Hospital Treatment Final Outcome
4	3	10 to 16	Entrance	+	+	0	0	Normal	Normal	Incipient	10	Continued slight glycosuria too much exercise died aged 45 of tuberculosis rapidly extended after pneumonia
			Discharge	U	U	0				W		
3	0	10	Entrance	+++	+	+	0	98	80	0	5	Died of tuberculosis 10 days after discharge
			Discharge	W	W	W	+	102	110	Acute caseous		
4	0	12	Entrance	0	0	0	0	98	90	Chronic fibroid	6	Improved living in fair health 2 years after discharge
			Discharge	U	U	0	0	98	85	U		
0	0	12	Entrance	++	++	0	0	97	80	Chronic fibroid	15	Improved well on diet 30 cal /kg 6 months after discharge
			Discharge	I	I	0	0	97	80	I		
6	14	9	Entrance	0	+	+	0	100	128	Chronic fibroid	5	Improved sugar free ever since well 1½ years after discharge
			Discharge	U	I	0	0	98	90	I		
5	0	18	Entrance	+	0	+	0	97	57	Chronic fibroid	3	Improved sugar free on 30 cal /kg well but weak 1 year after discharge
			Discharge	W	0	I	0	94	74	I		
8	Never	20 to 30	Entrance	+	+	0	0	97	84	Chronic fibroid	8	Improved died 5 months after leaving hospital circumstances unknown
			Discharge	U	I	0	0	96	72	U		
21	21†	23	Entrance	+	+	+	0	100	100	Chronic fibroid	5	Improved after each time in hospital 4 months later broke diet and died in coma
5	2		Discharge	U	I	I	0	98	80	I		
12	4											
Never	Never		Entrance	0	+	+	+	101	100	Acute caseous	1	Probably died later
			Discharge	U	U	U		99	90	W		
0	28	10 to 96	Entrance	+	+	0		98	65	Chronic fibroid	12	Died of tuberculosis in the hospital
			Later	W	W	+	+	102	110	Acute caseous		
3	0	16	Entrance	+	+	+	+	99	80	Acute caseous	3	Improved broke diet returned 4 months later in hopeless condition and died of tuberculosis
			Discharge	U	I	I		98	80	U		
2	0	11	Entrance	+++	+	+	+	98	90	Chronic fibroid	5	Improved fairly well 6 months after discharge sugar free on 45 cal /kg has gained 3 kg in weight
			Discharge	U	I	I	+	98	90	I		
Never	5	21	Entrance	0	0	+	+	102	100	Chronic fibroid	2	Improved left against our advice and has not reported since
			Discharge	U	U	I		99	90	U		
4	4	15	Entrance	+	+	0	0	97	70	Chronic fibroid	8	Improved abandoned diet one week after discharge and has not reported since
			Discharge	W	W	0	0	98	70	I		
2	0	13	Entrance	0	0	+	0	98	78	Incipient	5	Improved still in hospital
			Later	U	U	U		98	80	I		
2	0	16	Entrance	+	++	+	+	102	90	Acute caseous	2	Improved still in hospital
			Later	U	U	U		99	90	U		

Cases 1 to 9 were considered ketone free when the ferric chlorid reaction was negative in the urin In Cases 10 to 16 and in second and third entries of Case 8 the criterion was a negative nitroprussid reaction in the urine

† Three entries (see graphic chart)

‡ In Case 1 tuberculosis of right apex diagnosed at the age of 24 which cleared after two months on the Riviera In Case 5 night sweats for ten years In Case 6 slight morning cough for six years In Cases 3 4 and 7 the tuberculous activity was discovered at physical examination In Case 10 signs of activity were absent at first physical examination

sugar-free Deductions from this fundamental fact will be made later

It is interesting to note that the prevalence of tuberculosis among diabetics has been ascribed to the well known proclivity of the tubercle bacilli to grow in saccharin mediums This has been properly challenged by Montgomery, who observes that glucose solutions in vitro must have a concentration of at least 5 per cent in order to encourage growth of these microorganisms Human diabetic body tissues and fluids, except urine, rarely contain more than 1 per cent of glucose

Ignorance, poverty and its attending lack of hygiene play a more important causative role than does undernutrition Thus, we have already noted the decreased incidence of tuberculosis in privately treated diabetics Undernutrition per se does not seem to dispose to tuberculosis in the absence of the other factors just mentioned Preyss [4] noted in underfed animals no appreciable effect on the development of tuberculosis In many chronic diseases producing emaciation, no especial tendency to phthisis has been noted Such are pernicious anemia,[5] leukemia and exophthalmic goiter [6] Available statistics of tuberculous diabetics treated by low diets show no increase of mortality

TABLE 2.—ANALYSIS OF SIXTEEN CASES SHOWING THAT IN THE MAJORITY THE DIABETIC CONDITION WAS POORLY TREATED AT ONSET OF TUBERCULOUS ACTIVITY

Case No	General Nutrition	Diet	Glycosuria
1	Emaciated	1 900 calories 50 gm COH	0
2	Emaciated	1 400 calories 24 gm COH	0
3	Thin	Not strictly followed	Usually
4	Thin	Not determinable	+
5	Normal	Unlimited	+
6	Thin	Not determinable	+
7		Not determinable	
8	Thin	Unlimited	+
9	Normal	Allen treatment	0 (?)
10	Emaciated	600 calories 15 gm COH	0
11	Thin	Unlimited	+
12	Thin	Unlimited	+
13	Normal	Unlimited	+
14	Thin	1 400 calories 76 gm COH	+
15	Normal	Unlimited	+
16	Thin	1 800 calories 50 gm COH	0

Of 946 diabetic cases seen by Joslin [7] before inauguration of the Allen treatment in December, 1915, mortality due to pulmonary tuberculosis was 1 7 per cent Thereafter, among 748 cases, but one person died of phthisis

Pathologically considered, the acute caseous type of tuberculous infection characterized by rapid extension with cavity, and little tendency to fibrosis, has in the past been especially accredited to this pulmonary infection among diabetics Thus, West [8] in 1902, reporting fifty necropsies on diabetics, found of twenty-one showing tuberculous lesions seventeen to be active and the cause of death, only four cases being of the chronic type There is certainly no question that galloping consumption may seize on the diabetic Of our series, five such cases, or 31 per cent, have been observed three rapidly fatal, and one passing out of observation with small chance of recovery Montgomery has reported other cases We have, however, found the great majority of cases to be, just as in uncomplicated tuberculosis, fibroid with low grade activity

The clinical symptoms of phthisis developing in diabetics are especially insidious All writers agree as to this The loss of vitality, weight and strength is so well accounted for by the diabetes that the presence or gravity of the pulmonary complication is frequently overlooked The great frequency, as compared to living cases, of serious pulmonary tuberculous lesions in diabetic necropsies has been mentioned This may be condoned to some extent by the absence of clinical symptoms of phthisis The chest signs in even very extensive lesions may be relatively insignificant, hemoptysis, cough and sputum not marked or absent, and the temperature normal Subnormal temperatures, just as in uncomplicated diabetes, are not uncommon the evening temperature being, however, from 0 5 to 1 degree higher than the morning In 50 per cent of our cases of active tuberculosis associated with diabetes the temperature was normal or subnormal There may be no night sweats until near the end The bright eye and the hectic flush of the phthisic, as well

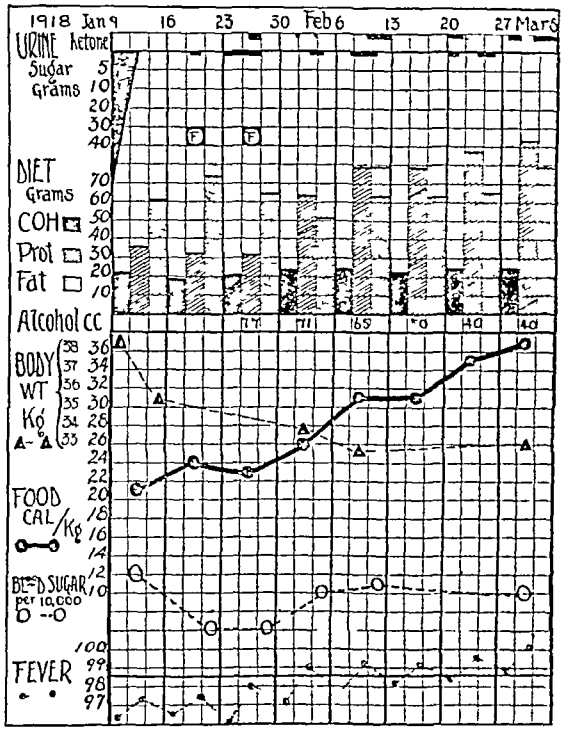

Chart 1 (Case 2).—Effect of fasting and low diet in lighting up a fatal tuberculosis in a diabetic In this and the subsequent charts the average daily diet has been calculated for each week carbohydrate protein and fat being shown schematically alcohol in numerals below Average daily caloric intake has been given as food calories per kilogram of body weight The temperature curve shows the average lowest and average highest temperatures for each week Fast days are indicated by an F within a circle half diet days by an F within a half circle

as the dusky reddened cheeks of the diabetic are missed in these cases In spite of contrary reports by others our series have furthermore all presented the dull ocular expression and pallor of the chronic invalid The characteristic optimism of the tuberculous is frequent Of laboratory tests it may be said that sputum is often negative until great pulmonary involvement has already occurred Only two of eleven cases of the chronic fibroid type have shown bacilli We have not sought sugar in the sputum of our series as we have deemed its presence no aid in diagnosis or treatment The roentgen ray, on account of the frequent latency of diabetic phthisis, becomes of more than usual help in diagnosis

4 Preyss Munchen med Wchnschr 38 418 1891
5 Cabot in Osler Modern Medicine 4 619
6 Dock in Osler Modern Medicine 4 820
7 Joslin E P Treatment of Diabetes Mellitus 1917 p 64
8 West Diseases of the Organs of Respiration 2 523 190-

PROGNOSIS OF DIABETES ASSOCIATED WITH PULMONARY TUBERCULOSIS

The prognosis to a great extent is that of the particular type of either disease exhibited by the patient, but is made somewhat more serious by the presence of the other But this is not necessarily true We have observed a severe case (Case 4) of diabetes of eight years' standing, in the course of which neither fasting nor prolonged periods of undernutrition caused a chronic pulmonary tuberculosis to show more than its usual slight activity The reverse is also observed A light diabetes may become no worse, or even the tolerance increase, in a case of fatal phthisis Indeed, rapid increase of tolerance in a diabetic with a pulmonary lesion, accompanied by increase of strength and general well being, is to be regarded as suspicious of insidious extension of the tuberculosis The lives of sufferers from these two grave maladies can only rarely be ultimately saved, but judicious treatment of the patient may be followed by the clearing up of all diabetic symptoms over long periods and cessation of tuberculous activity, with prolongation of life indefinitely

Institutional treatment of proper nature gives these patients much more hope, but unfortunately they are *personae non gratae,* both usually in the tuberculosis sanatorium and in the diabetic clinic, in either case on admission failing to get ideal treatment for one or both conditions Of our series, seven of sixteen have died, three of these fatal cases showed marked improvement on diabetic treatment The results here reported are more hopeful than is to be expected from home or ordinary hospital practice, for they were obtained in an especially organized and supported metabolic clinic provided with a trained dietetic, chemical and clinical staff The all-year-round mild climate of Santa Barbara has aided to make conditions as to improvement of the pulmonary conditions nearly ideal, as the treatment even of bed cases could be continuously carried out in the open air

TREATMENT OF DIABETES COMPLICATED BY PULMONARY TUBERCULOSIS

The course adopted in virtually each instance of the present series of sixteen cases has been to combine modern diabetic treatment with rest The case histories have been analyzed in Table 1 The results obtained may be thus epitomized Virtually all cases were rendered free of sugar within a period varying from two to six days Acidosis, when present, disappeared Most cases within one week failed to show diacetic acid and acetone in the urine In the two cases (9 and 13) in which the glycosuria did not disappear, treatment for urgent personal reasons was discontinued within a fortnight, the sugar having greatly diminished in both

Case 8 (Chart 2) illustrates three periods of improvement of both diabetes and tuberculosis resulting from strict diabetic treatment in the clinic Relapses of the pulmonary complication were associated with lapses from diet With bed rest and sufficient dietary restriction to control the diabetes, fever disappeared on the second day, never to return The cough, weakness and lung signs improved promptly, and the patient would again take up his occupation After leaving the clinic for the third time, he attained a normal blood sugar and gained 2 kg in weight, only to break diet again and die in diabetic coma

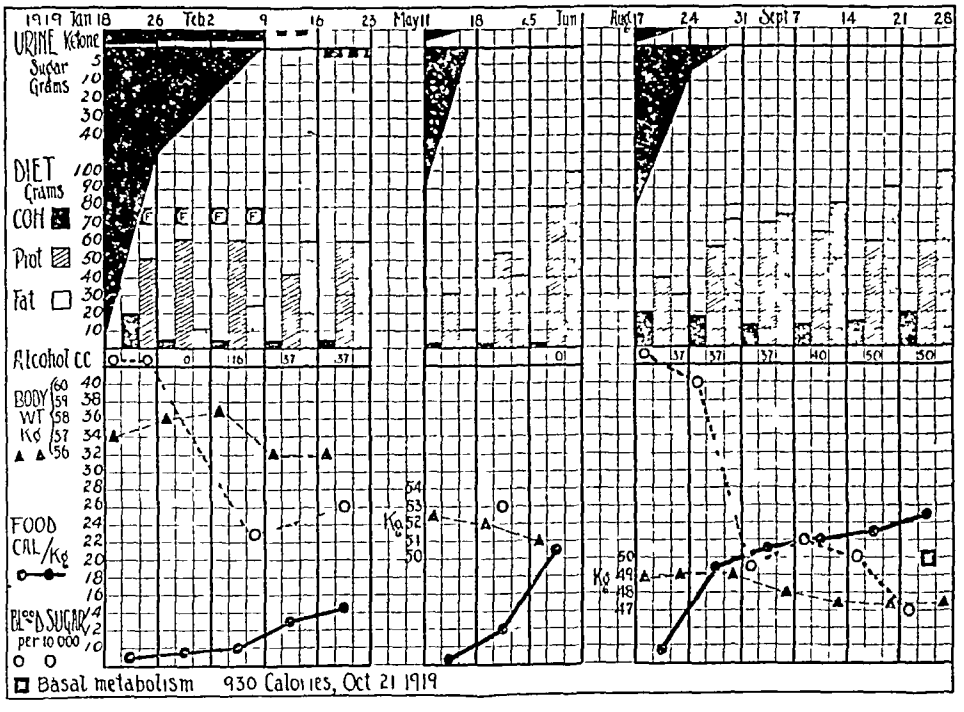

Chart 2 (Case 8) —Three periods of improvement in a severe diabetic case complicated by pulmonary tuberculosis The breaks in the chart indicate periods of home treatment

Blood sugar could be reduced to the normal in three cases This is unquestionably a lower percentage than that now observed in this clinic among uncomplicated diabetics, in the treatment of which a persistent effort is made to reduce the blood sugar to the normal and cause it to remain there The higher blood pressure level in this series may be ascribed mainly to the effect of the pulmonary infection, but in part probably also to our reluctance to push the undernutrition as far as in the diabetic with sound lungs Be this as it may, the blood sugar may be fairly regarded even in the phthisical diabetic as the best single laboratory guide to treatment, yet it is remarkable that the blood sugar in the cases in which death was due to tuberculosis fell to normal or subnormal, 7, 8, 10 per 10,000

In analyzing the results of the treatment of the tuberculosis, it was observed that cough and expectoration were present in ten cases, disappeared or improved in six, became worse in one and appeared de novo in one instance Six patients entered with elevated temperature This fell to normal in two cases In two

fatal cases, fever developed in the hospital Of ten patients showing both emaciation and weakness, six improved in strength, but one gained in weight Weight, however, is seldom attained in the treatment of uncomplicated diabetes The physical signs showed improvement in seven cases, remained unimproved in six, and became worse in three cases

Dietetic Technic—As in uncomplicated diabetes, this must be individualized However, our usual procedure was to order the patient a sufficiently decreased ration of protein and carbohydrate without addition of fat until the patient was sugar-free and the acidosis controlled, and then to increase the protein to between 1 and 2 gm per kilogram of body weight The carbohydrate and fat were subsequently increased The mild degree of acidosis usually encountered in the phthisical diabetic renders it likely that he is more fat tolerant than the ordinary diabetic, especially when febrile The permissible ratio of carbohydrates to fat has not yet been exactly defined Every effort is made to give as much protein and as many calories from the start as is consistent with effectual control of the diabetes Frequently more than 30 calories per kilogram were fed, especially to fever patients, when this value has reached 50 When the patient is taking sufficient calories to maintain his weight and strength, has a normal or low blood sugar, and improved tuberculous condition, he is judged fit for discharge with due precautions

Undernutrition and Fasting Relative to the advisability of employing a low diet in the treatment of diabetes complicated by tuberculosis in these cases one should be mindful of the important etiologic factor brought out in this study namely, that *the majority of our patients developed tuberculosis during the periods of neglected diabetic treatment during which sugar had appeared in the urine* (Table 2) If, then, decreased resistance and defective metabolic processes manifested by the glycosuric diabetic predispose to the development of tuberculosis and not, as has been already demonstrated, undernutrition per se (see above), we have here the chief indication for the treatment that has been followed in our series of cases Most diabetics with the pulmonary complication bear undernutrition exceedingly well, often with coincident improvement of the chest condition (see charts) It would be a grave error to take for granted that the principle of undernutrition can be applied without the utmost circumspection Thus the routine application of fasting is certainly best avoided

As we view it, the question of whether or not fasting or simple reduction of the diet should be advised is not worthy of being raised, as the principle is precisely the same Fasting was employed with good results in a number of our earlier cases reported in this series whose treatment was supervised by our distinguished colleague, Dr Nathaniel Bowditch Potter, the deceased founder of this clinic, whose own case is reported in this series For the past year fasting has not been employed in any case of diabetes complicated with tuberculosis The results are certainly as satisfactory as when fasting was employed In treating the great majority of uncomplicated diabetics fasting can now usually be avoided with considerably lessened hardship to the patient A diet low in carbohydrates and protein with fat omitted renders the patient in all but severest cases sugar-free in a few days at most, and also gives much more information than does fasting, concerning his true tolerance Though feared to an exaggerated degree by the profession, there is certainly a distinct element of danger in undernutritional treatment which can best be illustrated by Case 10, in which a prolonged period of fasting and protein starvation was maintained by a general practitioner who failed to recognize the presence of tuberculosis Our own treatment erred, we feel, in permitting too much exercise which hurried the development of rapidly fatal acute caseous tuberculosis extending from an old focus

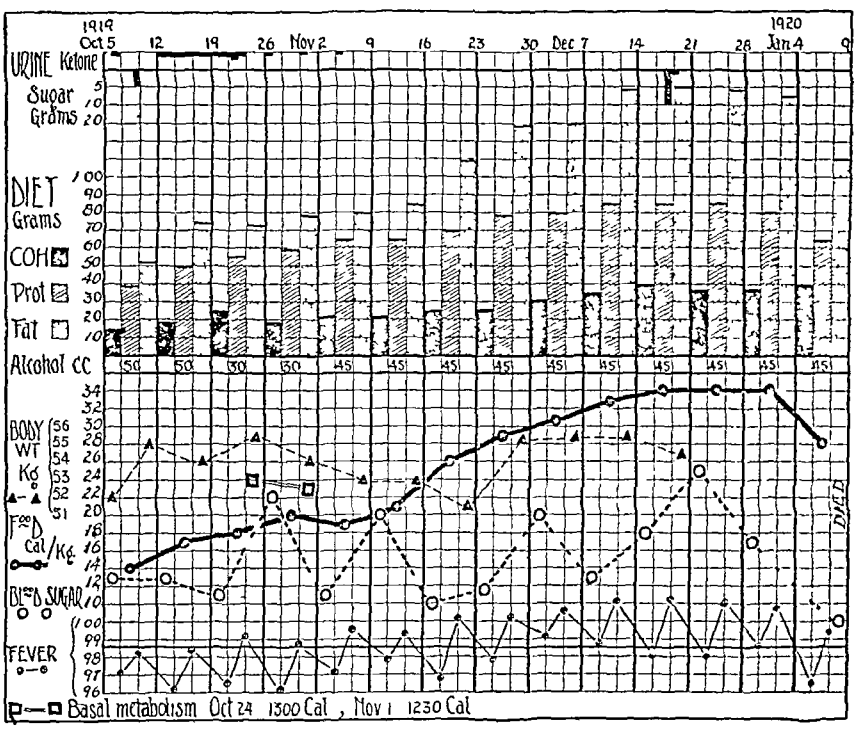

Chart 3 (Case 10)—Great increase in carbohydrate and food tolerance in last stages of tuberculosis Weight increase is due to edema Note fluctuations in blood sugar curve probably due to tuberculous intoxication

ADVISABILITY OF PERMITTING GLYCOSURIA IN A PHTHISICAL DIABETIC IN ORDER TO PREVENT DEVELOPMENT OF TUBERCULOSIS

Assent to this presupposes that it is possible to combat the tuberculosis by a diet in excess of the glycolytic power of the diabetic organism a diet which cannot be fully utilized The etiologic factor elaborated in this article namely that tuberculosis develops usually in the untreated diabetic showing sugar militates against acceptance of this view It seems then rather illogical to apply as a principle of therapy the same factor

which aided in the development of the disease to be treated If, indeed, we should at all permit our tuberculous diabetics sufficient food on which they show sugar, we should at least have some definite aim in view A criterion must be adopted We might demand a definite improvement of the tuberculous symptoms in a given time, let us say in one or two months of glycosuria There is only one example in our series in which conditions seemed to indicate such a course In Case 1, in which at one time there were present diabetes with mild acidosis, symptoms of gout, chronic diffuse nephritis, a bilateral extensive tuberculosis with pleurisy, and ascites, the patient was advised to take sufficient food for comfort, though a moderate amount of sugar was regularly excreted The patient was indeed more comfortable, but showed as would be supposed no improvement, and continued to the expected fatal termination Phthisical diabetics with fever and caseous chest lesions can usually eat, without showing glycosuria as much of a proper diabetic diet as they can digest without showing sugar or ketonuria In these cases the question whether feeding to the point of glycosuria may be permitted becomes unessential

Importance of Rest—The question here to be decided is whether rest is more essential for the tuberculosis than is exercise for the diabetes Our experience has shown that rest is just as essential for stilling tuberculous activity in a diabetic as it is in treating uncomplicated tuberculosis, whereas exercise can be dispensed with in the treatment of such cases without bad results from the diabetic standpoint All rules as regard graduated exercise in tuberculosis sanatoriums are equally applicable to the phthisical glycosuritic Inneed, it is proper that still greater than the usual precautions in this regard should be employed It is now our habit to keep in bed every patient with tuberculous diabetes exhibiting any suspicion of activity, until experience has demonstrated that his tuberculosis remains unaffected or improved by the diabetic dietary regimen Another desideratum is effected by bed treatment Exercise demands more fuel and puts more strain on an organism already weakened by a chronic infection A diet which during the stringent period of early diabetic treatment is sufficient both to control the glycosuria and to afford enough nutrition to combat the tuberculosis may be insufficient to meet the increased metabolic requirements of active bodily movement It is obvious that careful observation of the temperature, pulse, sputum characteristics and other minutiae of tuberculosis treatment must be rigorously carried out

Basal Metabolism—This was estimated in six cases of the present series with the aid of the Benedict-Carpenter apparatus In three cases of diabetes, with active tuberculosis sputum and bacilli, the metabolic exchange was found to be normal Apparently a balance was here struck between the tendency of an acute intoxication to elevate and that of diabetes with undernutrition to depress the basal metabolism, for the remaining three patients whose pulmonary condition was little active showed, as was to be expected, a reduction (from 15 to 37 per cent) of the respiratory exchange

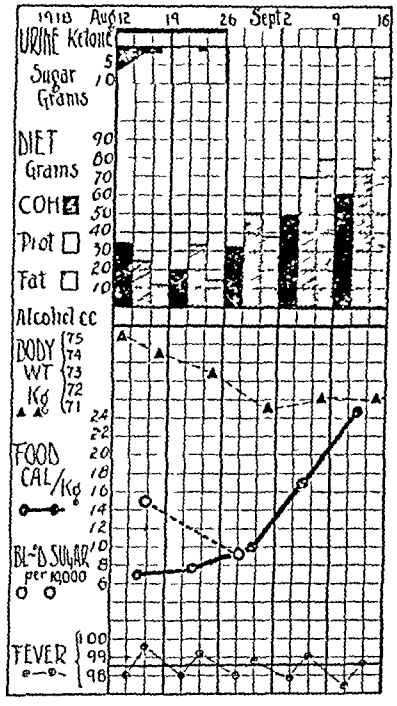

Chart 4 (Case 5)—Arrest of both tuberculosis and diabetes on treatment

SUMMARY

1 Data presented indicate that the untreated diabetic is more likely to develop pulmonary tuberculosis than when maintained sugar-free by modern dietetic methods

2 In a series of sixteen diabetic cases complicated by pulmonary tuberculosis showing activity, twelve patients definitely improved during a course of institutional treatment, diabetic symptoms disappeared in all but two cases, observed but a short interval Tuberculous symptoms improved in the majority of cases

3 Principles of treatment recommended are the judicious employment of sufficient undernutrition, combined with rest, to maintain the patient sugar-free and control the tuberculosis Fasting is unnecessary to obtain good results Ill advised fasting may lead to a fatal outcome Rest is at least as important as in the treatment of uncomplicated pulmonary tuberculosis

ABSTRACT OF DISCUSSION

DR FRANCIS M POTTENGER, Monrovia, Calif Dr Janney's paper emphasizes two points first, that the diabetic must not be allowed to develop active tuberculosis, second if he does develop active tuberculosis he must be cared for in the early stages of the disease Unless these two principles are regarded, the problem is a very serious one It is natural that a large percentage of untreated diabetics should develop tuberculosis It is recognized that latent tuberculous lesions exist in the lungs of a very large percentage of the human race and that whether or not these foci remain quiescent depends largely on the resistance of the patient Therefore, it can be understood that if the diabetes increases in severity it will lower the resistance and permit the tuberculous foci to become active So it is not at all surprising that a much larger percentage of untreated diabetics should develop tuberculosis than those who are treated properly I think we can safely conclude that if diabetics are treated in such a manner that their disease is held in check, a comparatively small percentage of them will develop tuberculosis The treatment of tuberculosis in the diabetic is a very serious proposition It is particularly serious on account of the feeding Undernutrition, if carried out for a long time, will undoubtedly hasten the tuberculosis On the other hand, if the steps necessary to the control of diabetes are not taken the tuberculous process will increase in severity The measures which help one apparently harm the other The prevention therefore, of the diabetic's becoming tuberculous is much better than an attempt to cure him after tuberculosis has developed

Rest should be adhered to very carefully as long as the tuberculous process is active, and, on the other hand, exercise is best for the diabetic patient In my experience in the treatment of tuberculosis I believe that the one factor that has added more to the chances of cure than any other is the principle of complete rest as long as the tuberculosis is active This is based on physiologic principles, as follows

A patient lying in bed, knowing how to relax, lives with the least expenditure of energy It takes 20 per cent more energy to sit in a chair quietly than it does to lie in bed It takes about 50 per cent more energy to sit in a chair and engage in active conversation than it does to lie in bed quietly, and it takes 100 per cent more energy to walk around than it does to lie in bed, and if the patient is working it will sometimes require three times the amount of energy that is required by rest Where it is necessary for the patient to live within his energy output, the factor of rest must always be considered The necessity of holding the tuberculous process in check is evident from the fact that as the tuberculosis becomes more active and the toxemia becomes greater the diabetes becomes worse, consequently, diabetes complicated by active tuberculosis is very apt to be an acute process

DR F M ALLEN, New York Diabetics have died from three main causes coma, tuberculosis and gangrene Treatment can nearly always prevent coma if begun in time, gangrene and other complications now still occur almost wholly on account of negligence because these conditions are almost wholly preventable What progress has been made concerning the combination with tuberculosis? In the Rockefeller Institute series this combination was encountered in three out of 100 cases, and general comparisons between strict diabetic treatment and an overfeeding policy turned out decidedly in favor of the former Other experience is in harmony with the points made by Dr Janney that the best treatment is undernutrition to the extent needed to control glycosuria and acidosis, that rest should be used in severe cases and only light exertion be permitted in the mild ones, and that more or less arrest of both diseases and particularly improvement in the tuberculosis and secondary infections of the lungs are thus obtainable Fasting must be used rigorously in some of the worst cases, even for a week or more continuously, and is preferable to continuance of glycosuria and acidosis In milder cases it is often avoidable, and a low calory diet, consisting of little or nothing but protein, is usually best for improving the diabetes by undernutrition while keeping up strength to resist the infection More than a year ago a young soldier was received in the diabetic service at Lakewood in the extreme stages of both diabetes and tuberculosis, and by rigid fasting and diet he became able to live six months longer with some actual freedom and enjoyment In milder cases the gain is correspondingly greater Nevertheless, these two diseases form one of the worst combinations possible When either the diabetes or the tuberculosis is at all severe the ultimate prognosis is hopeless For this reason the strictest treatment is seldom advisable, in particular, strictly normal blood sugar and completely negative nitroprussid reactions in the urine need not be insisted on

The prolongation of life by from six months to several years, particularly when it is attended by both increase and prolongation of comfort and usefulness, is a goal well worth while Most of us, however, are not prepared to treat these patients to the best advantage Most tuberculosis institutions lack the special dietary and laboratory equipment necessary for the proper management of diabetes As these combined cases are numerous either tuberculosis sanatoriums should provide themselves with the requisite diabetic equipment in charge of a medical and nursing staff trained in metabolism, or such patients should go to special institutions Dr Janney has the aid of the equable climate which attracts so many consumptives to California, and should be able to obtain optimal results The incidence of tuberculosis among diabetics before the days of diet treatment must have been numerous It appears that tuberculosis has diminished to a greater extent among diabetics than among the population at large, and that this diminished incidence is due chiefly to better treatment of diabetes Tuberculosis is generally superimposed as a complication on an existing diabetes, not vice versa, and it is the untreated or inefficiently treated diabetic who is so highly susceptible to tuberculosis Extremely undernourished and weak diabetic patients show no lack of resistance to most infections and perhaps, have an increased immunity to common respiratory infections Colds and grip at least are surprisingly infrequent among them They will probably continue to be slightly more subject to tuberculosis than the population at large, but thorough diabetic treatment is going to prevent an enormous number of cases of tuberculosis The same rule applies to the prevention of gangrene in the old and coma and tuberculosis in the young Either treat your diabetics thoroughly yourself or send them to somebody who will When general practitioners no longer allow elderly patients to go along with glycosuria year after year, and when they make early diagnoses in young patients and either send them to a specialist immediately or equip themselves to carry out accurate treatment, the suffering and deaths from all diabetic complications will fall to a fraction of the existing prevalence

DR WILLIAM C VOORSANGER San Francisco I am never without one of these cases It is the worst class of tuberculosis to treat, and although we agree that the diabetes is primary, nevertheless, the tuberculous institution gets the end-result These people come to be treated for tuberculosis, and the disease which is really killing them is diabetes The diabetes is naturally a disease of undernutrition, as tuberculosis is, but the treatment of diabetes requires undernutrition and the treatment of tuberculosis requires overnutrition The treatment of the diabetes combined with rest would unquestionably achieve greater results than any which we can accomplish in any tuberculosis institution, and I would be very much in favor of seeing a metabolic clinic suitably equipped, where these cases can be handled

DR. LOUIS J GENELLA, New Orleans The ease with which anybody can recognize tuberculosis in the diabetic has always impressed me I think the reason is that there are only two ways of recognizing tuberculosis in the chest One of them is by some sound transmitted either by or through some alteration in the hydraulics of the chest, whether in the rales or by other fluids in the chest. The other is by the recognition of the bacilli in the sputum Sputum is easily obtained from the diabetic If the tuberculous patients were able to furnish us from the base of the lungs a pint of sputum, we could detect tuberculosis in other diseases just as easily and just as soon and just as often as we do in diabetes

DR N W JANNEY, Santa Barbara, Calif An important point which may be emphasized is that the detection of cases of tuberculosis among diabetics is frequently made only by a careful history and physical examination We are too likely to take a short history, only directed to this condition, and abbreviate unduly the physical examination I am glad however to be able to say that a number of the cases included in the present report were detected in our clinic I wish to emphasize, also the matter of the instruction of these patients with regard to their treatment and the nature of their disease as influencing their mode of living I have been very much impressed, in the treatment of all chronic diseases with our laxity in this regard We should try harder to benefit such patients by teaching them diabetic cooking and the necessary restrictions necessitated by their tuberculosis The matter of sputum I did not touch on There is less positive sputum found in these cases than is usually the case in tuberculosis A few years ago it would have seemed foolhardy to attempt to apply the principle of undernutrition to tuberculous patients Dr Allen's studies have permitted us to do so with a fair measure of success

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Need for Clinical Research—The present day conception takes too narrow a view of the field with which medical science has to deal It assumes that instrumental methods are of necessity the only scientific methods It has been assumed because recording and measuring instruments and other methods have greatly advanced such limited fields of medicine as physiology bacteriology and chemistry that therefore clinical medicine should adopt the same methods In medicine there are phenomena which the scientific instruments of today however delicate, can neither register nor measure and there are methods necessary for the investigation of disease which no laboratory experience can supply —J MacKenzie *Brit M J* **1** 105 (Jan 24) 1920

MISTAKES IN ONE HUNDRED THYROIDECTOMIES

WITH DESCRIPTION OF A NEW METHOD OF THYROID CAUTERIZATION IN TREATING EXOPHTHALMIC GOITER *

J TATE MASON, M D
SEATTLE

This series of 100 thyroidectomies for relief of toxic symptoms covers a period of eight years The series consists of fifty-eight patients operated on for toxic adenomas, with one death, and forty-two patients operated on for exophthalmic goiter, with five deaths During the eight year period the mortality attending surgical procedure has been markedly reduced This reduction has been largely brought about by a fuller appreciation of our earlier errors in judgment

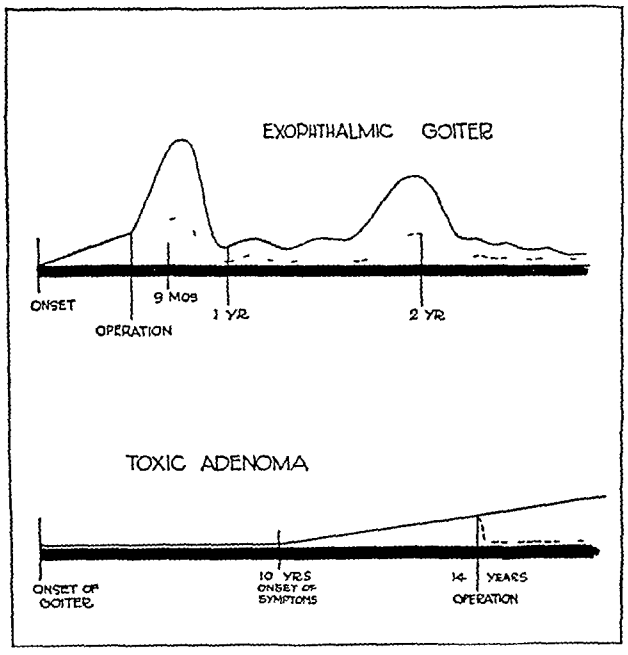

Fig 1 —Exophthalmic goiter Base line normal health curved line above, intoxication of patient who has not been operated on dotted line intoxication of patient following operation Toxic adenoma Base line normal health line above gradual increasing intoxication of patient dotted line, operation

TOXIC ADENOMAS

Toxic adenomas produce a sequence of symptoms somewhat different from exophthalmic goiter There is usually no sudden exacerbation such as characterizes exophthalmic goiter, but a gradually increasing chain of symptoms over a period of many years, the symptoms beginning years after the goiter is first noted Our histories show that the goiters were first observed in the teens or twenties and existed for several years at least before toxicity was observed

Substernal goiter was found in six patients, all showing thyrotoxic and pressure symptoms All these cases were adenomatous, which, with other studies, leads us to believe that all substernal goiters are adenomatous and sooner or later become toxic

Secondary operations were necessary on six patients because of recurring symptoms associated with considerable enlargement of that portion of the thyroid left at the previous operation Immediate improvement was noted following the first operation for a period averaging two years, then within a few months the symptoms became nearly as marked as before the first operation

Rest and medical treatment preliminary to operation should be undertaken in bad cases to get the patient into reasonably good physical shape After such preliminary treatment we remove most of the thyroid gland These operations can usually be done under morphin and local anesthesia The patients sit up on the third day and leave the hospital at the end of one week, provided the cardiac condition is reasonably good

Postoperative results were ascertained by inquiries sent out in January, 1920 More than half the patients answered All reported themselves cured or improved and as having regained their normal weight Their general health was vastly better, and they were all greatly pleased with the operative result In fact, there is no group of surgical cases in which the end-results are more satisfactory than in thyroidectomy for toxic adenomas Bad judgment was manifestly exercised as we look back at certain cases

In our fifty-eight cases only one was lost This death occurred in a Christian scientist who requested operation, but refused the preliminary treatment necessary to get her into good physical shape The poor judgment in operating under these circumstances was inexcusable

We operated immediately on a few patients who urgently needed preliminary medical treatment While only one death resulted, we have had some very stormy postoperative days that could have been avoided

In the first years we exercised bad judgment in not operating on a few extremely ill patients, usually because of bad hearts We now regard no toxic adenoma patient as too poor a risk to put at rest under observation, with a view to thyroidectomy Even the worst cases can usually be tided over a thyroidectomy If thyroidectomy can be performed there is great subsequent improvement in the patient's general and cardiac condition

Recurrence of goiter and toxic symptoms seems to indicate that we have occasionally removed too little of the thyroid, so our present tendency is to remove more rather than less *No bad results have followed this plan*

EXOPHTHALMIC GOITER

Exophthalmic goiter, with few exceptions, runs a typical course, as has been recently confirmed by Blackford in studying our cases Had we known in the early years the usual course of this disease, our mortality would have been lower

The typical case shows a slight thyroid enlargement with mild toxic symptoms, during several months The symptoms gradually increase until about the eighth month, when they become markedly worse During the ninth month there is an explosion of symptoms, commonly known as a crisis Then there is a period of improvement, with fairly constant symptoms At about the end of the second year a second crisis occurs, never quite so severe from the standpoint of toxicity as the first After this there are ups and downs until, after years, the toxicity of the goiter wears out and we have occasionally a cure, but usually a human wreck, suffering from cardiac and general degenerations

* From the Mason Blackford Dowling Clinic
* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

Early in the disease it may be difficult to make a diagnosis of hyperthyroidism The basal metabolism rate will be of great assistance at this period, because it assures the diagnosis and enables us to urge surgical interference at the time when most benefit can

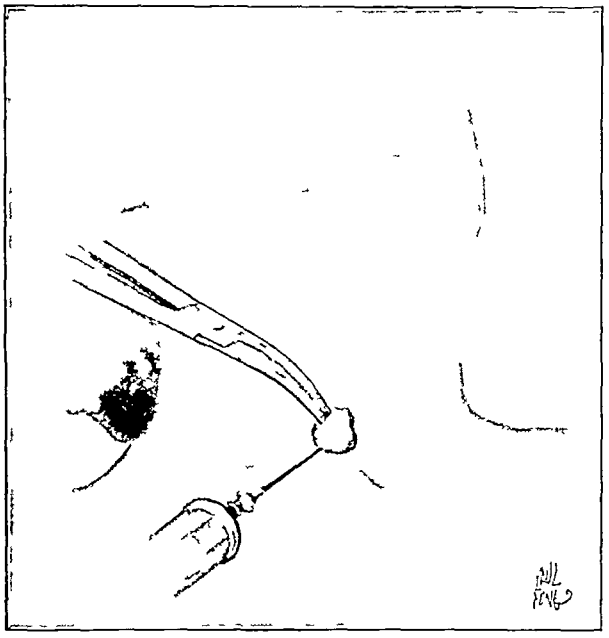

Fig 2—A piece of cotton is frozen with ethyl chlorid and held on the neck for thirty seconds A needle can be inserted under this without pain and without the patient s knowledge of what is being done

be secured The heart, liver and kidneys have not been damaged, the operative risk is good, the end-results are better than at any other time during the course of the disease

Unfortunately, if the patient is put completely at rest and given any medicine or none, there is a temporary improvement This temporary improvement, and the rapid improvement which occurs following the crisis, has caused many drugs to be considered specific, and much valuable time has been lost to patients because this improvement has been credited to the medicine Thus, good surgical risks have been permitted to become extremely poor ones Should the patient be allowed to go through the usual course of the disease, there is such marked change in the vital organs that it is impossible by surgical interference to secure more than a relative cure

The ideal time for operation is within the first six months The closer we get to the high wave of toxicity, the higher is the mortality and the larger the number of incomplete cures The patient operated on before the first crisis is eventually much better off than the one who is carried to and then through the crisis by medical treatment and operated on later However, the patient who is operated on early in the disease will have a slight wave of toxicity at the time of the first crisis, but the severity of this wave will be reduced in proportion to the fraction of the gland removed If four fifths of the thyroid has been removed, the subsequent crisis will be one-fifth as severe

In extremely toxic cases it is impossible to tell how much operative interference will be tolerated As a rule the patient's history and general condition, the pulse and pulse pressure and the metabolic rate give an index to the degree of intoxication But the shock or acute exacerbation of symptoms following operative procedure is not always as expected Sistrunk says that of two patients with a plus 50 metabolic rate and other findings about the same, one may stand thyroidectomy well, while the other will prove to be a poor surgical risk In other words, we have no accurate way of determining the amount of damage already done, although our findings on the present activity of the gland may be fairly accurate

Postoperative results have been reported by three fourths of our exophthalmic goiter patients They are all improved, and most of them feel that they are well Two are still marked cardiopaths A third is an inmate of a hospital because of degenerative changes dating back to the first high wave of toxicity These three exemplify the cases which we so often see following exclusive and persistent medical treatment, the hyperthyroidism has disappeared, but the degeneration of vital organs persists

Secondary operations have proved necessary on five of our exophthalmic goiters In these five cases there were remarkably severe reactions following thyroidectomy This observation, with other experience, leads us to believe that there is less reaction if a very large part of the gland is removed

Lack of judgment as to the best time for interference and the best type of operation on exophthalmic goiter has given us much grief—in fact, we feel that our most serious mistakes have been due to lack of a full appreciation of the dangers of the crisis of the disease and by attempting too much in extremely bad cases Three of our deaths, even now, appear to me to have been unavoidable, but the other two patients

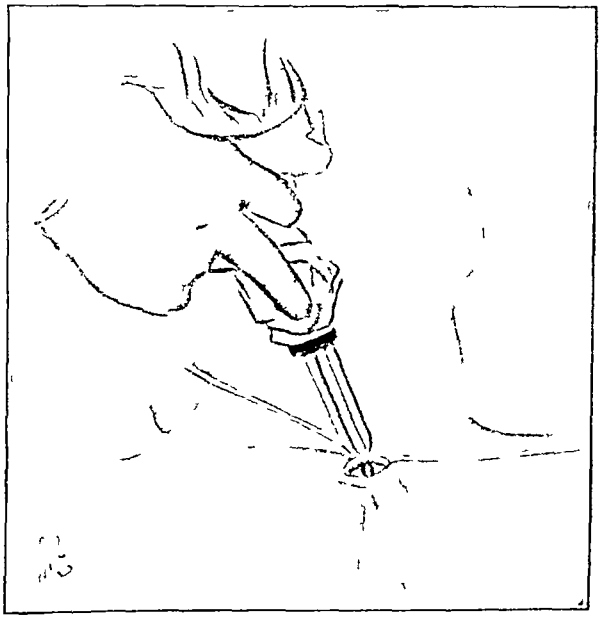

Fig 3—The skin platysma and fascia have been severed Separation of muscles with blunt scissors

would now be treated more conservatively While anxiously watching the first three days of a stormy convalescence, we have often wished that a less complicated operative procedure had been undertaken

In operative procedures in bad exophthalmic goiter cases we use little general anesthesia In all such

recent cases, operations have been performed under local anesthesia, a little ether occasionally being used when it becomes necessary to pull on the gland

There are a few patients who are such poor surgical risks that we wonder whether anything surgical can be attempted We have kept them at rest and under medical treatment until maximum improvement is attained, and then have depended on the injection of boiling water or ligation of one superior thyroid artery to secure further improvement

Injection of boiling water may give an idea of the reaction of the patient, but it destroys no portion of the gland Ligation will often precipitate a severe attack of hyperthyroidism There is almost always reaction, this is especially true following ligation The collateral circulation is unquestionably restored within a few days, which leads us to believe that the improvement following is largely due to an increasing immunity to the disease resulting from these high waves of toxicity

We all agree that the symptoms subside as soon as the gland is safely removed Then in these bad cases our ideal surgical treatment leading to thyroidectomy should theoretically destroy or remove a small portion of the goiter, with little or no reaction from the patient Theoretically, this removal or destruction of a portion of the gland should be painless, it should be very simple, it should give no reaction

Actual cauterization of the exophthalmic gland has been done during the last two years in a few cases, and has apparently approached this theoretically perfect surgical treatment It is so simple and so painless that it can be performed without the patient's being

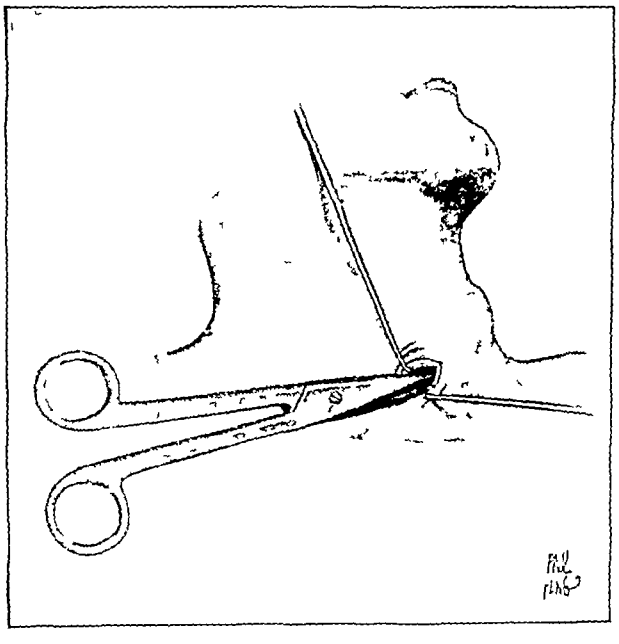

Fig 4—Cautery being applied to gland

conscious of what is going on Reaction has been negligible The results have been excellent

TECHNIC AND COMMENT

Local anesthesia is begun by pressure for thirty seconds to the point chosen for the first needle puncture of a cotton applicator frozen with ethyl chlorid Thus we are able to introduce the first needle without pain Careful infiltration with procain is then made in the usual manner An incision 2 cm long is made just to the inner side of the sternomastoid muscle, in the line where the thyroidectomy incision will later be made The skin, platysma and fascia are divided in the same direction, these tissues are pulled back with

Fig 5—Patient who has had three fractional cauterizations

small retractors, and the underlying muscles split with blunt scissors When the goiter is exposed, the retractors are inserted down to the gland By slight traction the fibrous capsule can be separated from the anterior surface of the gland, exposing the peritoneal-like membrane over a space the size of a dime The field is made dry Then an electric cautery, while cold, is passed through the incision down to the anterior surface of the gland The current is turned on and the cautery rocked slowly from side to side, a piece of gland about the size of a shoe button being destroyed, and causing coagulation of a much larger area No sutures are inserted, but two or three clips are used for closing the skin Petrolatum is applied to the outside of the wound to prevent the first dressing from sticking

There is usually a little muscular soreness at the first dressing, but otherwise we have experienced no local reaction There has been no hemorrhage, sepsis or sloughing, and there has been no unusual difficulty in performing subsequently a thyroidectomy

This procedure may be repeated every few days, destroying larger portions of the gland until the patient is considered a safe risk for ligation or thyroidectomy Further incisions are made 2 cm apart, care being taken to keep them in the same line as the future collar incision for thyroidectomy The usual collar incision later will manifestly obliterate all external evidence of the cauterization

In a few recent cases we have used the fractional cauterization in place of ligation If this method proves as efficient as it seems to be, it may enable us to do away with the reaction and unsightly scarring of ligation

Surgical mortality in exophthalmic goiter will always be higher than in other types of goiter, because of the nature of the disease Yet, by taking these patients through a series of minor operative procedures, it is surprising how many can be relieved without a death

For years it has seemed desirable that we destroy or remove a small part of the exophthalmic goiter gland in extreme cases, with minimum shock to the patient In a few cases our method has given results exceeding expectations We commend it to you to test and to pass upon

CONCLUSIONS

1 All patients suffering from toxic adenomas or exophthalmic goiter are surgical cases

2 Preliminary rest and medical treatment are essential to a low mortality risk in bad cases

3 Poor end-results are usually due to operation undertaken after the onset of permanent degenerations in vital organs

4 Fractional cauterization of the gland in bad exophthalmic goiter cases has proved efficient, either as preliminary treatment to ligation or in replacing ligation

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DIAGNOSIS AND MANAGEMENT OF INTRATHORACIC GOITERS*

FRANK H LAHEY, M D
BOSTON

The following remarks are based on an operative experience with four completely intrathoracic adenomas of the thyroid, one large completely intrathoracic thyroid cyst, and sixty substernal or incompletely intrathoracic thyroid growths, varying in the depth of their locations from almost completely intrathoracic goiters to slightly substernal adenomas or colloid goiters

Fig 1—Course of deviated trachea (indicated by arrows) and intrathoracic shadow

It is my opinion that too little attention has been directed to intrathoracic goiter, which may be so satisfactorily operated on, and so plainly diagnosed, if its presence is recognized before its growth has reached proportions which threaten life by obstructing respiration, or preclude removal because of the extent of its diameters

Concealed thyroid growths occur as two types, namely

1 Those completely intrathoracic, in which no part of the goiter is visible or palpable, or in which just the uppermost part is barely palpable in the sternal notch

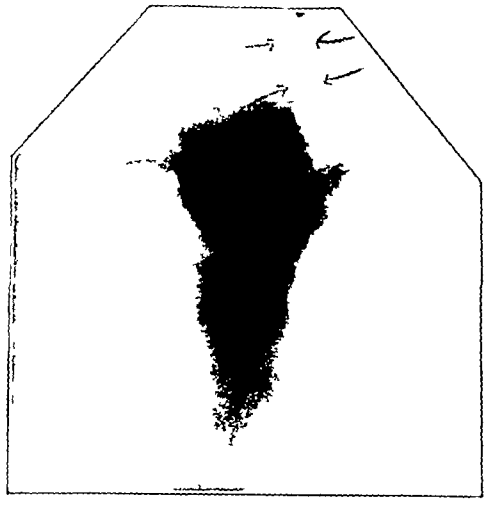

Fig 2—Course of deviated trachea (indicated by arrows) and intrathoracic shadow

This group is made up of adenomas or cysts of the thyroid

2 Those incompletely intrathoracic, in which the major portion of the goiter is on the neck, and easily visible, its lower pole being substernal, subclavicular or intrathoracic This type is made up of adenomatous, cystic or colloid goiter, and in connection with the latter (colloid), I wish to remark on the frequency, in my experience, of calcification in this type of enlargement of the portion situated within the chest

The location and anatomy of the thyroid gland are such that one would expect that all enlargements of the thyroid reaching any size would be directed downward in their growth, whereas, in fact, the growth of such enlargements is commonly directed forward

The influences that tend to direct the progress of growth in cysts, adenomas and colloid enlargements inferiorly are as follows

First, the enlargement is constantly subjected to pressure anteriorly by the anterior group of neck muscles—sternothyroid, sternohyoid, omohyoid and sternocleidomastoid It must be borne in mind that inferiorly no supporting structures offset the results of this anterior pressure, since the inferior boundary of the thyroid is the open upper thoracic aperture, so that when no antagonistic influences are present, such as adhesions of the growth to the trachea or attenuation on the part of this group of anterior neck muscles, the tendency must be seriously to influence the direction of growth downward

A further factor favorable to intrathoracic growth is that the thyroid and its contained tumor or cyst ascend and descend with swallowing, a condition which influences the tumors or cysts situated in the lower poles or in the isthmus of the gland constantly to mold for themselves a bed ever [illegible] downward

*Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

with the increase in size of the cyst or tumor In this connection, also, one recalls the fact that the deeper of the two anterior neck muscles, the sternohyoid, is inserted, not into the top of the sternum, but over the top and downward into the posterior surface so that it acts in a guiding capacity in directing growths from above downward within the thoracic cavity

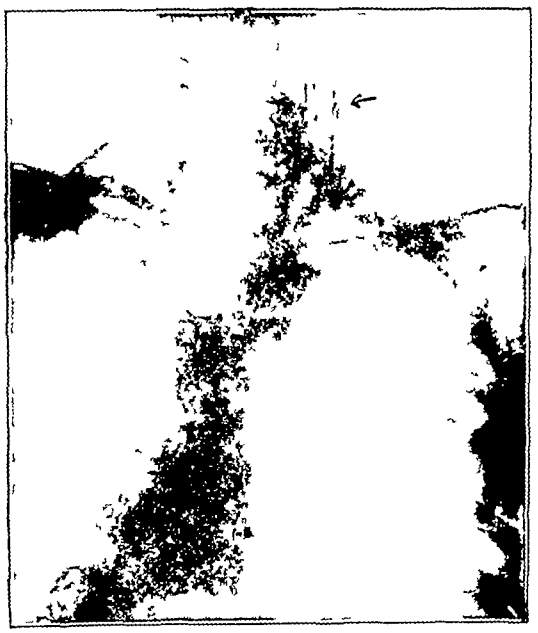

Fig 3.—Course of deviated trachea (indicated by arrows) and intrathoracic shadow Outline of trachea exaggerated by mark

The foregoing are the principal factors that influence the downward extension in certain instances of thyroid enlargements of the variety already mentioned, and these factors in large part bring about the condition spoken of as Group 2, incompletely intrathoracic goiters, or substernal or subclavicular goiters

Group 1 the completely intrathoracic goiters, however, require still another influence to bring about their development

An adenoma or cyst lying free in the thyroid, for example, is directed downward by the influences already spoken of, until it is a true substernal or incompletely intrathoracic goiter To become then completely intrathoracic, the diameter of the tumor itself must increase, and whether it becomes completely or but partially intrathoracic depends on whether the axis diameter is below the level of the top of the thorax, or above it If above, it will enlarge upward If below, owing to the fact that the thoracic cage narrows in approaching its upper aperture, as shown in the illustrations, with increase in axial diameter, there will be, because of the outflaring walls of the chest, a gradual descent of the tumor into the thoracic cavity This, I believe, is the mechanism of most cases of completely intrathoracic thyroid growths

If the foregoing assumptions are true, why is it that so few of the adenomas and cysts become completely or incompletely intrathoracic?

Two factors, already mentioned, play a large part in preventing this condition

The first factor is the great variation in the development of the anterior neck muscles, particularly the sternohyoid and sternothyroid One who operates frequently for hyperthyroidism—a condition of the thyroid which virtually does not affect this pair of muscles at all—cannot fail to be impressed with the apparent attenuation in these muscles in a great number of cases, and in such cases the important factor of anterior pressure must be largely lost Clinically, either as cause or effect, one frequently observes attenuation, and often almost entire fibrosis of the longitudinal muscles over the adenomas and cysts of the variety that has enlarged anteriorly

The other factor is the firm adherence to the trachea of many of the anteriorly enlarging types of thyroid growths, a clinical fact that all thyroid operators cannot fail to have observed—adhesions that are firm and supporting, and doubtless play a considerably antagonistic part toward the influences directing downward growth

As regards the evidence of intrathoracic goiter, this type usually reveals itself by various degrees of respiratory obstruction, dependent on the progressive growth of the adenoma or cyst It has been my experience, too, that periodicity of attacks of respiratory obstruction has been quite constant, and it is probably because of these periodic attacks of dyspnea that several of the cases of intrathoracic goiter have been treated for a long time, by various medical and surgical measures, for asthma The labored breathing that accompanies the attacks simulates asthma in that the respiratory effort is marked, but in no other way does it resemble it

Roentgen-ray examination demonstrates the substernal shadow continuous above, and as a distinct widening of the upper sternal shadow A feature that is of even greater diagnostic value is the bowing or deviation of the trachea, as shown by the roentgenogram This takes place when the adenoma or cyst grows from one side, but when it is bilateral in

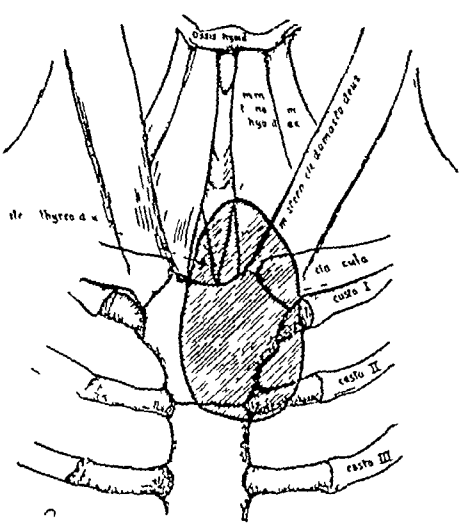

Fig 4.—Diagrammatic location of intrathoracic mass in relation to the sternum ribs and anterior neck muscles

growth—as occurred in one case—the trachea is then not deviated, but collapsed from before backward When deviation is demonstrated by the roentgen ray, there can be little doubt as to the existence of an intrathoracic growth On fluoroscopic examination, ascent and descent are of value in differentiating these from other mediasternal growths which do not move Since these growths are possessed of well-marked capsules,

one may often clearly trace the shadow of the capsule outlines, a blurring of which is said to create a suspicion of malignancy Clinically, this is to me a proved fact, as tumors of the thyroid whose lines of cleavage have been lost by fusion of their capsules with surrounding structure have in virtually all instances proved malignant in character

A late involvement of the recurrent laryngeal nerves, as evidenced by the late appearance of a husky

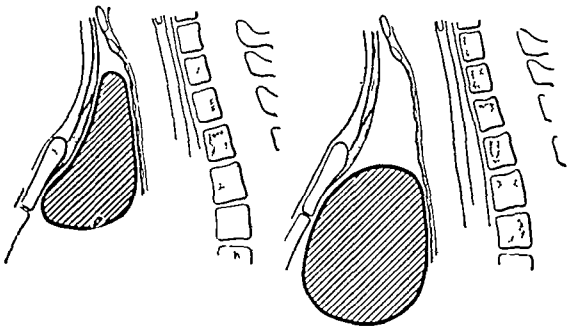

Fig 5 —Intrathoracic mass shown incompletely and completely illustrating how with increased diameter the upper pole of the mass is drawn into the thorax

voice, when the tumor has been present for a long time, is also a factor suggesting malignancy

Intratracheal examination by a trained laryngologist is of great value in the diagnosis of these conditions, as by this means deviation, narrowing or denting of the trachea from pressure may be demonstrated Not only in the concealed, but also in the incompletely intrathoracic type, this measure has been helpful in demonstrating pressure

Percussion dulness has been present in all of the completely intrathoracic goiters

In two of my cases, the upper part of the tumor was just barely palpable below the sternal notch, and this condition is, of course, conclusive evidence of the existence of an intrathoracic mass

It is assumed that surgery is accepted as the only curative procedure available in this condition, and my remarks in this connection will therefore be limited only to such points as have arisen in my own personal operative experience in dealing with thyroids of this variety

Perhaps the most essential single feature in the operative procedure is that the intrathoracic mass be delivered as a whole Piecemeal delivery is to be avoided because of the almost uncontrollable deep bleeding which occurs if the tumor is broken up while still located within the chest These intrathoracic growths are very vascular within their capsule, but if delivered intact they readily permit of vascular control by ligation of their more or less pedunculated blood supply Piecemeal removal is also to be avoided because of the possibility of leaving adenomatous masses behind, from which recurrent growths may develop

Since these deeply seated adenomas and cysts no doubt act as foreign bodies within the chest, they become surrounded by a layer of condensed connective tissue, which is of great value In the first place, it is most essential to remain within this tissue layer while freeing the tumors, as it forms a barrier against the extension of the infection which accompanies postoperative drainage of the resulting cavity Furthermore, it establishes distinct lines of cleavage, within which one must remain in order to prevent injury to the recurrent laryngeals and the thoracic duct Finally, penetration of this layer of connective tissue opens up the possibility of venous oozing within the thorax, resulting hematoma, and possible mediastinitis

The dissection of these completely intrathoracic masses must be by gently sweeping the fingers around the tumor within the lines of cleavage spoken of above Attempts should not be made to drag the mass out from above, but rather it should be pried out by pressure from below, when possible

With increasing experience with these deep-lying thyroids, one becomes impressed with the amount of force which it is possible to apply in prying these masses out of the chest

If all other measures fail, and delivery is impossible, because the diameter of the tumor is greater than that of the upper thoracic aperture, recourse may then be had to splitting the sternum—a measure which was necessary in one of those cases—by which wedges may be inserted, and the thoracic aperture so widen that delivery is possible It is a surprising fact that if dissection is gentle and within the lines of cleavage, enormous masses may be delivered with virtually no bleeding, since their blood supply enters from above downward, through the inferior thyroid artery and vein, which become elongated and stretched with the descent of the tumor mass, resulting after delivery in

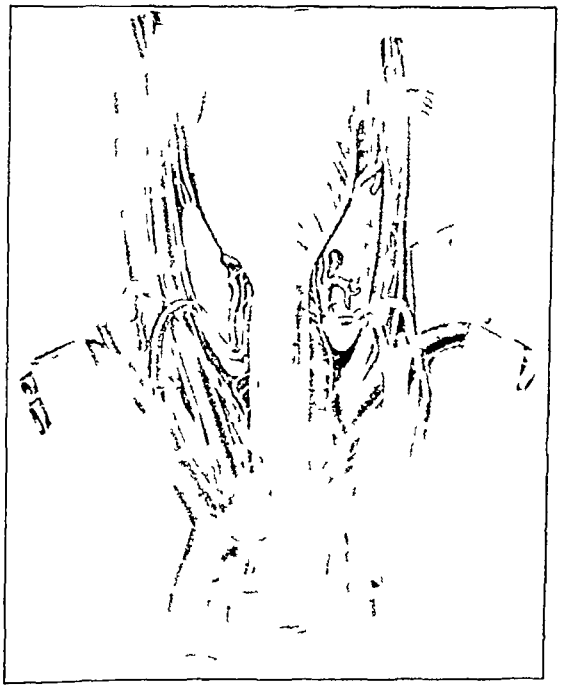

Fig 6 —Semidiagrammatic painting of a posterior dissection of the neck made at the thyroid level showing the length and course of the inferior thyroid artery which permits it to descend into the thorax with the tumor

a pedunculated tumor the tumor representing the portion which before delivery lay in the thorax and the pedicle representing the elongated thyroid vessels

The question of anesthesia in these cases is a trying one, since operation is often performed under conditions of complete or partial respiratory obstruction Of the five completely [illegible] goiters in my

experience, one was operated on as an emergency, with no anesthetic, one with a local anesthetic, because of almost complete obstruction, one with intratracheal ether, and two with gas-oxygen In all of the incompletely intrathoracic cases operation has been performed with gas-oxygen Of the five patients, four have made completely satisfactory recoveries The fifth died on the eleventh day of bilateral pneumonia

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ADVANTAGES OF LOCAL ANESTHESIA IN THYROID OPERATIONS*

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The thyroid is one of the oldest and most generally recognized fields of application of regional anesthesia The risks of general anesthesia in such operations are serious and numerous Madelung and Socin, M L Harris, James Berry and many others have drawn attention to the advantages of local anesthesia in thyroid surgery Among the most important dangers of general anesthesia in goiter operations are (1) postoperative pneumonia, (2) overtaxing of the heart, (3) overtaxing of the kidneys, (4) increased danger through failure to block the sensory nerve paths, resulting in the needless consumption of nervous energy as explained by Crile, (5) injury of the recurrent laryngeal nerve, and (6) asphyxia of any degree

Advantages in respect of operative technic ascribable to local anesthesia are

1 More perfect hemostasis may be obtained through the use of suprarenal extract in nontoxic cases

2 Dissection of the skin flap may be performed more easily and more quickly, owing to thickening of the panniculus adiposus from inhibition of the solution

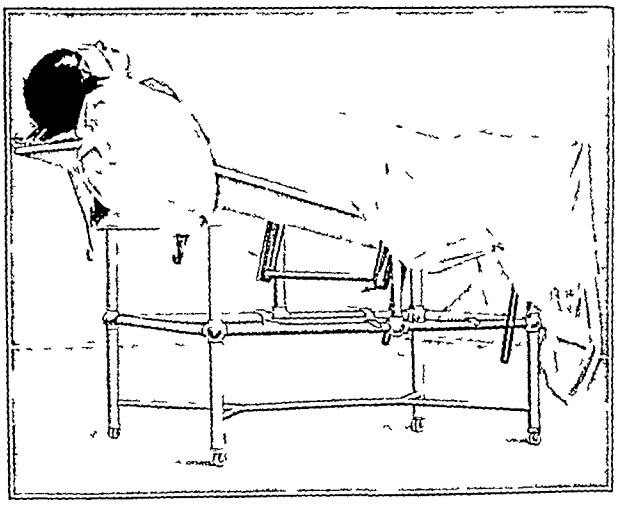

Fig 1—Safe and convenient inclination of operating table

3 There is greater facility of delivery of the gland, owing to the elevation of the lobes on the water-bed and thickening of the capsule

4 By conversation with the patient, the operator has a constant check on such exhaustion producing factors as pressure of instruments on the vital structures of the neck which cause discomfort, if not direct embarrassment of respiration and circulation with asphyxia

5 The patient can inform the operator at all times whether the head and neck lie comfortably and therefore correctly and safely

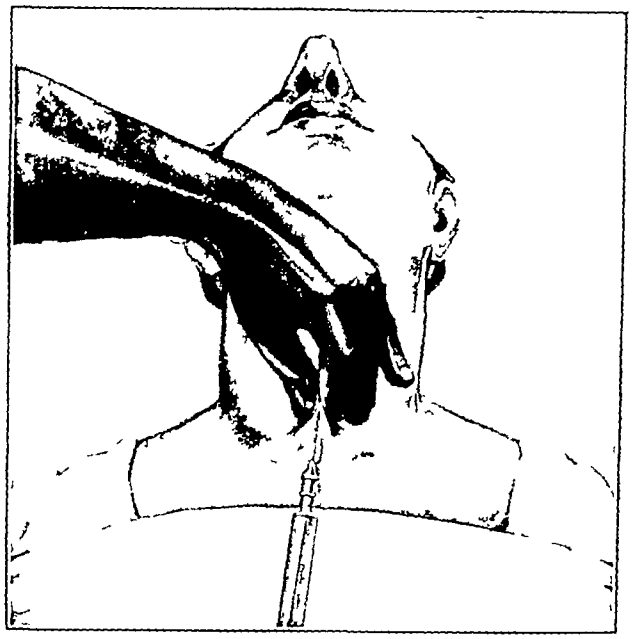

Fig 2—Simple method for making first introduction of small hypodermic needle almost painless blunting sensation by pressure

6 Local anesthesia enforces gentle manipulation of the tissues, minimizing pressure on the gland with its danger of overactivation of the heat, as proved by Cannon

7 Postoperative nausea, vomiting and strangling, with the attendant risk of bleeding, are practically eliminated

8 The patient can take liquids by the mouth immediately after operation, eliminating proctoclysis, which is annoying to excitable toxic patients

In a relatively small percentage of goiter operations, general anesthesia may present these advantages over regional anesthesia

1 There is complete relaxation and unconsciousness

2 Operation under general anesthesia demands the use of less gentleness and patience on the part of the operator than does regional anesthesia

3 The operation may be performed more quickly under general anesthesia

These are doubtful advantages The excitation incident to the induction of inhalation anesthesia is often greater than that which attends operating under local anesthesia Here the personality of the surgeon is of great importance One extensively experienced in the use of regional anesthesia will appreciate and utilize the hypnotic influence of the kindly caressing voice, the tranquil manner, and the attitude of frankness and decision which win the confidence of a timid patient The employment of regional anesthesia develops these qualities in an operator This, of course, is in the line of the anoci-association plan, with which the name of Crile is so honorably connected

The patient need know very little of what is going on, if a Kocher screen is used or the simple expedient

*Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

employed of placing a wet napkin of gauze over the eyes Then, too, the preparation of the patient for the induction of local anesthesia is important in this connection "The terror of the operating room, and the bad impression which the patient receives owing to the observation of everything connected with an operation are removed or at least considerably diminished if a mild narcotic be administered an hour before the operation is begun Thus the patient's cerebration is sufficiently blunted to external influences as to prevent further excitement"

Concerning the question of the amount of patience and forbearance which regional anesthesia requires of the surgeon, is it important that the tax on the surgeon is less with general anesthesia? If this is true, is it not fair to say that goiter surgery should be left to surgeons of patience and forbearance as well as technical skill? However great the virtuosoship of a surgeon in brilliant technical performances, he must lay great stress on the qualities of patience and cool judgment in goiter work

A great and worthy leader of American surgery said recently that he had no time to perform suprapubic prostatectomy under local anesthesia Should not the poor "prostatiker" with crippled heart and kidneys be turned over to one of reasonable skill who has enough time to provide the safeguard given by regional anesthesia?

Injury of the recurrent laryngeal nerve should rarely occur in local anesthesia The surgeon, talking with his patient, can know at once when this nerve is compressed or otherwise traumatized An interesting experiment under local anesthesia consists in producing hoarseness by compressing the recurrent laryn-

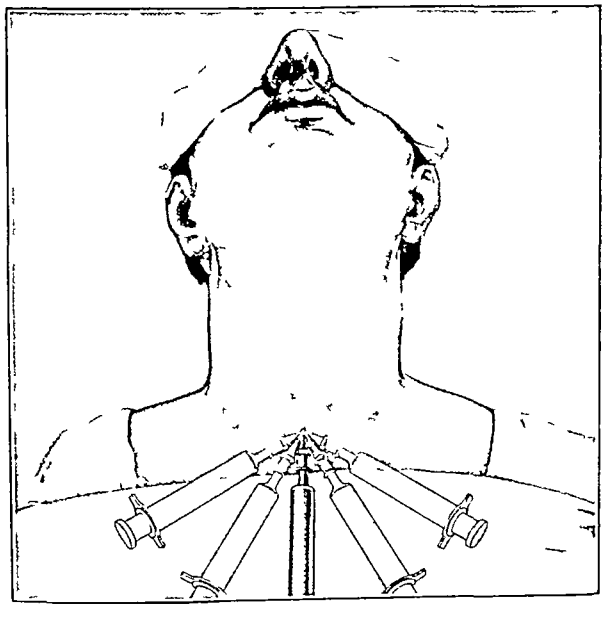

Fig 3 —Infiltrating all superficial structures through one puncture

geal nerve and relieving it at once on releasing the pressure Traction on the recurrent laryngeal elicits hoarseness and gives timely warning

Likewise in goiter surgery, the extra burden imposed on the lung, heart and kidneys by general anesthesia must be viewed with a due sense of its seriousness Suffice it here to quote Sistrunk, who says that in toxic cases, "with each crisis the damage to vital organs, especially the heart, liver and kidneys, increases until the patient finally suffers more from the symptoms produced by these degenerative changes than from the disease itself" Surgeons who have employed local anesthesia extensively are, I think, as a rule convinced that certain shock producing assaults on the cord or

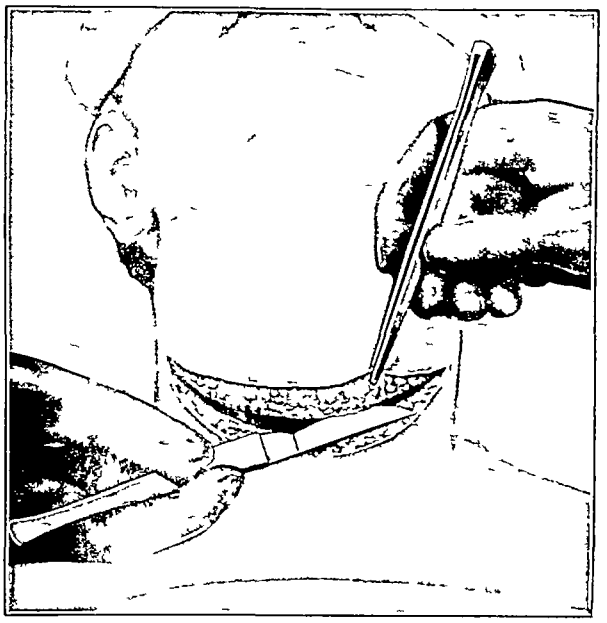

Fig 4 —Imbibition of panniculus adiposus facilitates dissection of flap

brain may be inhibited to a large degree by its use This is especially true if the patient is protected from frightful and irritating influences before and during the operation and if the pain centers are benumbed with morphin

After regional anesthesia, one does not observe the depression that follows general anesthesia Briefly, it seems fair to say now that accumulated evidence has established the value of regional anesthesia in the prevention of shock, which is of more avail than its treatment One need hardly reiterate that, in compliance with the theory of anoci-association, the prevention of pain after operation should receive interested attention

If the operating is done under regional anesthesia, the surgeon will be reminded that lying in one position on a hard table means discomfort and pain He will, perhaps be reminded by the patient, if it does not occur to him, that a pillow in the hollow of the back and a soft comfortable pillow under the head and neck have the effect of reducing the traumatism incident to the operation He will be taught respect for the nervous system of the patient, and will eventually make regular application of Crile's admonition that general anesthesia does not cut off the painful afferent impulses, but only inhibits their physical interpretation

It is quite well known that the addition of suprarenal extract to the procain solution in nontoxic cases not only lengthens the period of anesthesia produced by procain but also makes possible a much more complete control of hemorrhage Fewer artery clamps are required, and this is of importance since the pressure of clamps on the neck by their weight and traction may be the cause of the only discomfort felt during local anesthesia

In this connection it may not be amiss to recall the lessons of Kocher relating to provisional ligation in goiter operations Artery clamps should not be left on the neck during the operation without good reason No time is lost if the vessels are tied as soon as they

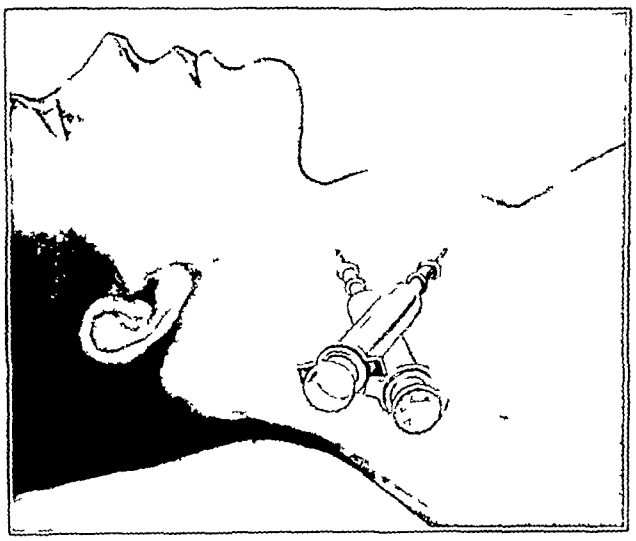

Fig 5 —Perineural anesthesia of poles

are grasped by the artery clamps They must be tied eventually, so why permit the wound to be cluttered with the clamps during the operation? The clamps which provide for bloodless division of the ribbon muscles can be removed after interlocking ligatures to the number of four or five on each side are applied under the clamp jaws If the ends of these ligatures are left long, they may be employed as retractors dur-

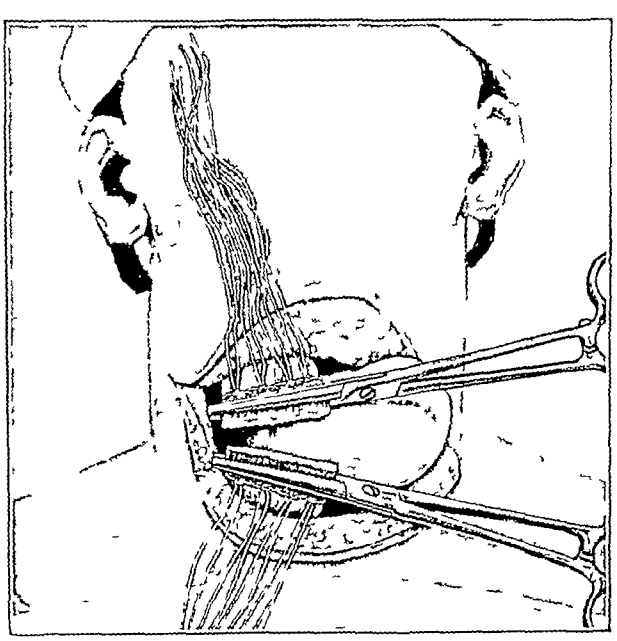

Fig 6 —Hemostatic sutures in ribbon muscles under forceps jaws make possible the removal of the forceps freeing the field of all clamps

ing the operation, and used to unite the cut edges of the muscles on completion of the operation

Ochsner admonishes that surgeons who are inclined to be violent in their manipulations should perform thyroidectomies under local anesthesia, with its enforced gentleness, since there is no doubt as to the likelihood of increased postoperative perversion of thyroid function if the tissues are severely traumatized

The loss of blood seems to have the same effect It is consequently wise always to clamp each vessel between two hemostatic forceps, cut between these and ligate In this manner the entire operation may be performed with the loss of almost no blood and therefore with greater facility The tissues at the close of the operation will not be saturated with blood, the absorption of which, according to Kocher, increases the likelihood of hyperthyroidism

It should not be embarrassing to the operator if the patient converses with him, informing him perhaps during the course of the thyroidectomy that traction on a lobe is producing dyspnea, or that the pressure of a hand or of the instruments is causing discomfort It is one of the valuable advantages of local anesthesia that the patient participates in the matter of protecting himself against unnecessary trauma

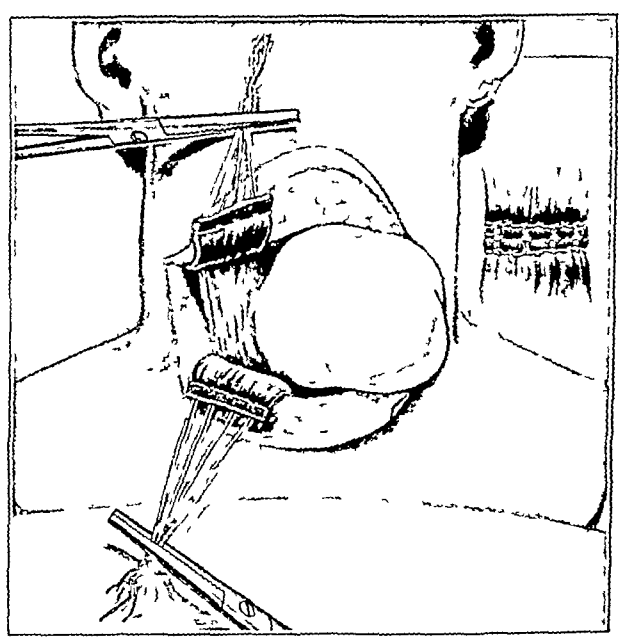

Fig 7 —Hemostatic sutures in ribbon muscles used as retractors

Local anesthesia makes its appeal to surgeons who are willing to consider all of these apparently slight factors of precision and gentleness, to proceed with the caution of a serpent and the patience of Job It is not a proper field of activity for those who still lay stress on the now discredited surgical showmanship

Very important is the positon of the patient on the operating table "Let the patient be the judge to tell us whether the head lies correctly It is not necessary to be guided by the stridor, the patient can say whether the neck is pressed upon or too greatly angulated" [1]

For what good reasons are the head, neck and trunk elevated in thyroid operations? Lowering the head augments the blood supply to the brain and also to the lungs and heart A position of slight elevation of the trunk, with the neck curving gently backward, is perhaps one of greatest comfort to the patient and of value for the vital reason that in this position the

1 Schwyzer Gustav Diagnosis and Surgical Treatment of Intrathoracic Goiter, J A M A 74 597 (Feb 28) 1920

heart and lungs are less liable to overtaxation Thus it is of importance that the patient can indicate to the surgeon that he or she is made panicky by an unfavorable position

If a 1 per cent solution of procain-epinephrin is injected copiously into the subcutaneous tissues and muscles, there will of course result a marked imbibition and thickening of the subcutaneous panniculus After becoming accustomed to this, the surgeon will not be disturbed in any way by this resulting imbibition, on the contrary, it renders the freeing of the skin flap more easy and more expeditious Likewise, deep injections at the upper and lower pole not only establish perineural or infiltration anesthesia in the painful areas along the sides of the larynx and trachea, but they greatly thicken the loose weblike fascia external to the capsula propria, which thickening really facilitates freeing and delivery of the lobes

Postoperative observation of the enormous material of the Mayo Clinic indicates that the degree of improvement that follows thyroidectomy depends to a considerable degree on the extent of damage to the vital organs at the time of operation If the damage to organs has been extensive, it is impossible to restore the patient to normal health Here again we are reminded of the great importance of protecting the heart, lungs and kidneys against overtaxation As a factor assisting in the restoration of the normal metabolic balance following the operation, it is here submitted that the use of local anesthesia offsets to some degree the effects of the increased metabolism by bringing up the rate of food intake in the first few days following the thyroidectomy The patient can take liquids or even house diets, beginning at once after the operation In dehydrated patients, water or other fluids taken by the mouth render unnecessary the

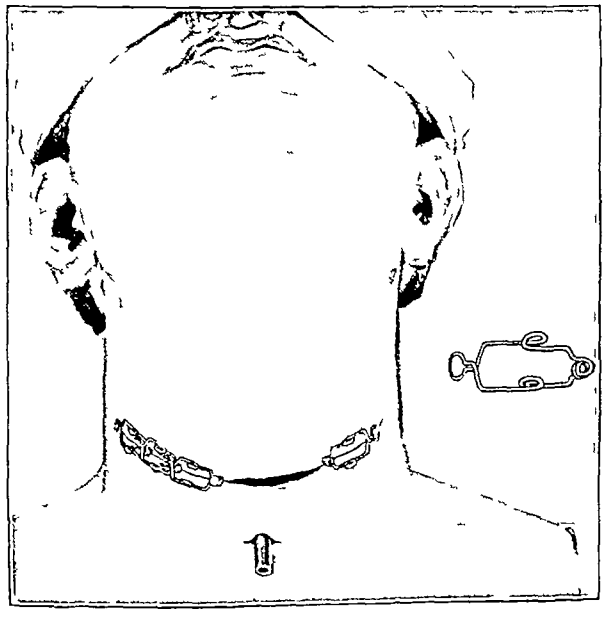

Fig 8—Herf clips close wounds quickly and precisely

employment of proctoclysis which in toxic thyroid cases, is as a rule more or less exciting

If the patient is not permitted to take too much water by the mouth during the operation there is little likelihood of vomiting either during or after the thyroid operation and this is of practical interest as postoperative bleeding is as a rule due to postoperative vomiting and strangling

Thus it is seen that the elimination of vomiting and the administration of food by the mouth immediately after operation have a bearing on the important question of metabolism In conclusion, it may be said that, whereas one perhaps should not take the supercilious position that those who do not succeed with regional anesthesia in thyroid surgery fail because of lack of skill or understanding, it may nevertheless be fair to say that considerable experience must precede efficiency in employment of regional anesthesia, that the use of suggestion or hypnosis secured by an appropriate personality on the part of the surgeon and proper environmental influences is desirable, and that much caution and patience on the part of the operator are indispensable

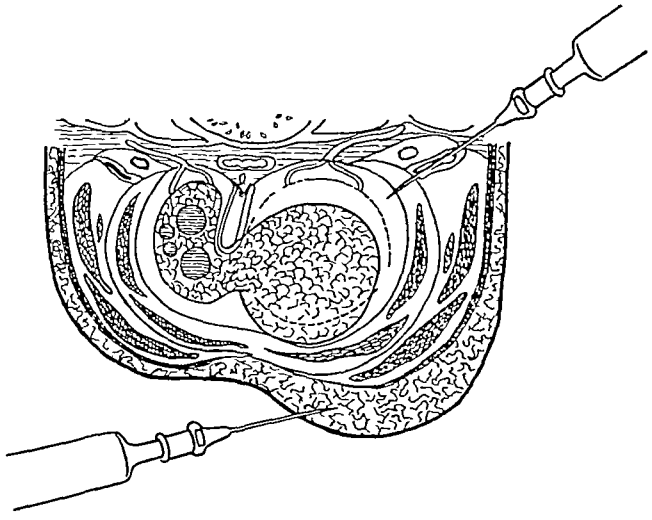

Fig 9—Diagram showing thickened panniculus and water bed under lobe caused by imbibition such imbibition facilitating the turning back of the skin flap and delivery of the gland

331 North Delaware Street

AN EMERGENCY TECHNIC FOR THYROIDECTOMY*

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The admirable Halsted technic, based on anatomic grounds, or some modification of it has up to the present been employed whenever a thyroidectomy has seemed indicated It has fulfilled all requirements when the patient has been carefully chosen, with an assured margin of safety, still, a number of operative experiences during the last year have shown me that the indications for thyroidectomy may be very considerably broadened by the employment of a technic which is based on pathologic principles and is calculated to make the minimum demand on the patient's strength To this end, one waives every consideration of a cosmetic nature (although it may be stated in passing that the visual end-result is not so bad as to disappoint greatly the patient, especially if he is a man who wears a collar of ordinary height or a woman whose matrimonial question has been settled) the sole

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

aim here being to destroy the greatest amount of thyroid tissue possible, which could not be accomplished without risk to life if done in the usual manner

This may, then, for want of a better expression, be termed an emergency technic 1 It contemplates the

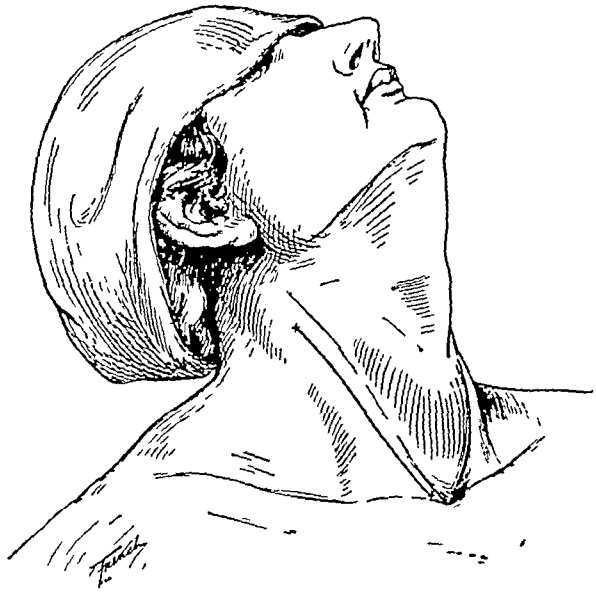

Fig 1—Site of intended incision marked before infiltration is commenced

most direct, rapid and bloodless approach to the tumor 2 It prevents the tissues being contaminated by toxic thyroid juices 3 It saves the time ordinarily spent in ligating vessels and in closing the wound 4 It eliminates the accidents which not infrequently cause loss of blood while ligating the numerous vessels divided It naturally follows that shock is rendered unlikely, because, as will be seen, the operation is short, the efferent nerves are blocked, and very little retraction is necessary Likewise, postoperative hyperthyroidism is not to be expected because absorption cannot take place, the wound being left wide open (absorption, of course, is only a partial explanation of postoperative hyperthyroidism) This phase of the subject, however, cannot lightly be dismissed by one who has seen postoperative temperature invariably drop when fluid was found secondarily in cases in which no change in the central nervous system had become manifest

In the past, the great danger of thyroidectomy for toxic patients has consisted in our doing too much and thus bringing about a fatal postoperative toxic condition In consequence, we have gradually been driven to primary ligation for most of the serious cases In these cases, then, it may not be out of order to attempt primarily a form of thyroidectomy, the gravity of which has been reduced to something like that of ligation Speaking in general, in the past we have divided our patients into three classes (1) the safe risks, (2) those who were rejected, and (3) the doubtful class which contains most of our unpleasant postoperative surprises Nothing need be said here about the first group, those that are definitely fit for any form of operation, or for the second, on whom no one would do more than a ligation, if even that But this emergency technic is intended for the doubtful patients who seem too good for ligation, but in whom no positive guaranty of safety can be given after a classical thyroidectomy has been done No less an authority than C H Mayo says that ligation is of value only in the exophthalmic hyperplasia type with demonstrable vascular disease, hence the toxic adenomas indicate a thyroidectomy only, if operation at all Many of these patients are so ill that the classical Halsted operation is highly dangerous to them

The preparation for operation does not vary materially from that generally used We rest these patients, feed them, try to improve the failing circulatory apparatus, and ward off an impending acidosis by the administration of morphin and fluids No operation of any kind is justified in a person with persistent vomiting

As soon as the patient has reached the maximum of improvement and becomes sufficiently well acquainted with the surgeon to exhibit any degree of confidence in him, she is taken to the operating room, in full possession of her faculties, without any preliminary morphin for fear of vomiting on the table, the head of the table is slightly elevated, and the face is turned away from the operator The site of the intended incision is now marked (Fig 1) just behind the anterior border of the sternomastoid, care being taken not to run down within 1 cm of the clavicle (Fig 2), else an ugly scar will result

A diamond-shaped area is infiltrated about the growth through two needle punctures (Fig 3), one at each end of the mark just mentioned It suffices to infiltrate the subcutaneous fat and the muscle planes with 0 5 per cent procain As such a patient must under no circumstances be kept lying long on the table, it is well not to wait for a nerve block, but to infiltrate the skin where marked and proceed with the operation just as quickly as possible after she is placed in position

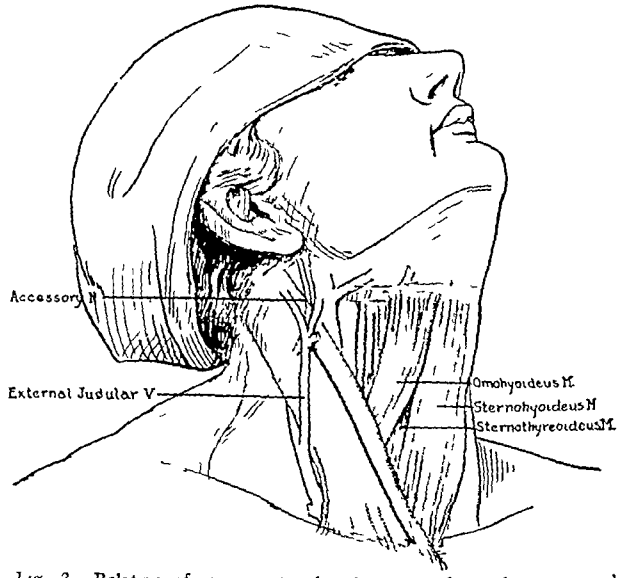

Fig 2—Relation of incision to clavicle external jugular vein and spinal accessory nerve

This form of incision has a number of advantages It allows one to approach the tumor by the most direct route, it encounters vastly fewer vessels than does the "collar incision," it avoids the extensive separation of tissue planes as contemplated in making the Halsted flaps, it is in a line with the axes of the important deep structures, it obviates retraction to a very considerable extent, and it insures that the resulting ridge-

like scar will lie on a preformed prominent ridge, namely, the sternomastoid muscle

As soon as the skin incision has been made, sutures (Fig 4) are introduced to be tied later, and then held out of the way by an automatic spreader (Fig 5) which engages in the angles of the wound

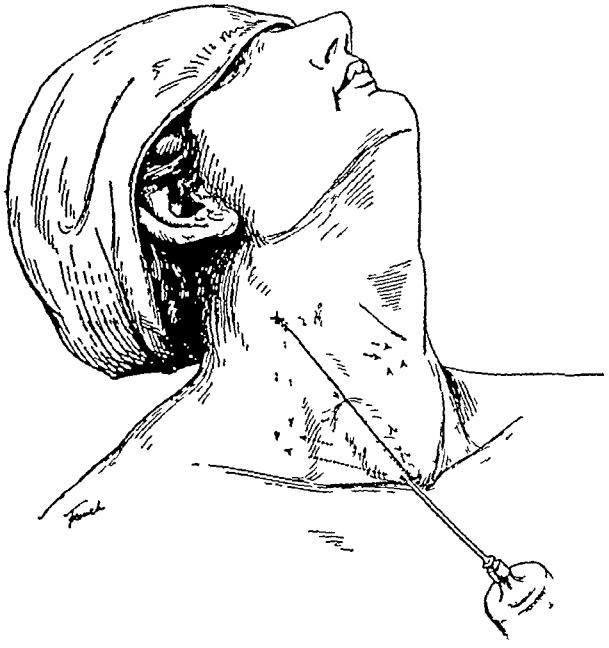

Fig 3.—Infiltration in two planes about tumor also the skin in line previously marked

The platysma incision corresponds with that in the skin, this unimportant muscle being the only one whose fibers are divided in any but a line parallel to them After gentle retraction (Fig 6) of the lower sternomastoid outward, and of the opposite upper wound lip inward, the ribbon muscles are split longitudinally (Fig 7) over the most prominent portion of the growth below (Fig 8) It will usually be found that the upper pole and superior thyroid vessels lie directly under the upper angle formed in the divided ribbon muscles, thus greatly facilitating the further progress of the operation It will be noticed just here that the gentlest possible retraction gives all the room for approach that is needed, quite contrary to the experience that all of us have had when operating through a midline ribbon muscle incision

The exposed lobe is now caught with two or three light intestinal clamps and gently lifted At this point the whole defect is flooded with alcohol (Fig 9) to seal up all tissue spaces against absorption of toxic material to be liberated in amputating a moment later As a further guard against this accident, we often pack the furrow around the gland with a roll of dental cotton, provided there is room enough, which is by no means always the case

The upper pole is now divided (Fig 10) and the lobe gently drawn toward the angle of the jaw, while capsule and goiter substance are divided after clamping from above downward (Fig 11) In this way it becomes surprisingly easy to slip out the lobe gently with the minimum of work about the lower pole and without roughly luxating the gland with the finger, provided there is no outspoken parathyroiditis By working in this way, the procedure is rendered practically bloodless and the patient disturbed not at all

In some instances the stump has been cut off with the cautery, thus destroying thyroid juice as liberated, and at the same time sealing over denuded surfaces It must be admitted, however, that this may be an unnecessary refinement

None of the clamps on thyroid substance are ligated in order to reduce tissue necrosis to the minimum No attempt is made to whip over the cut thyroid surface, fearing retention of toxic products and consequent symptoms In other words, *all of the clamps are left on the stump* (Fig 12), although in most instances we have ligated the few which were required to control bleeding from the other subcutaneous structures In one instance a total of fourteen clamps was left in place, in another, twenty-six in another, thirty-four, and in one other still a larger number of which no count was made The instruments we employ are the lightest that are adequate, namely, the clamp designed by Dr Halsted, and used commonly in his clinic at the Johns Hopkins Hospital The instruments are bunched together by a mass of dressing wrapped about them in such a way as to bring pressure to bear on the skin of the neck, and on their handles (Fig 13), thus tending to lift their weight upward instead of allowing them to rest on the floor of the defect The whole bundle is now covered with cotton, and a bandage applied around the neck and under the arms

It goes without saying that a wound held open in this manner cannot possibly retain the fluids forming in it, hence the most complete drainage is secured The patients who have been operated on in this way have complained of sore throat in just about the measure we see it in other forms of lobe resection I will say that they almost universally have difficulty in

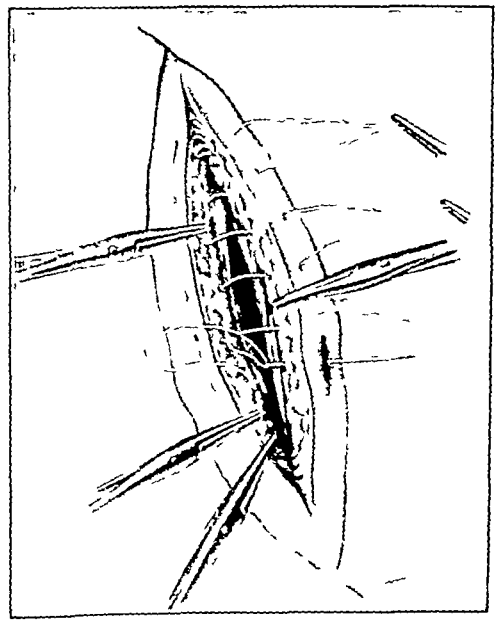

Fig 4.—Introduction of skin sutures

swallowing until the moment when the clamps are released then they are suddenly freed from this minor discomfort It will be recollected in passing that many a person whose neck has been sewed up in the ordinary way swallows with difficulty for a day or two Postoperative and pain rot the removal

instances was packed in the spaces left between the clamps It is therefore deemed inadvisable to use any packing at all when the clamps are left in place

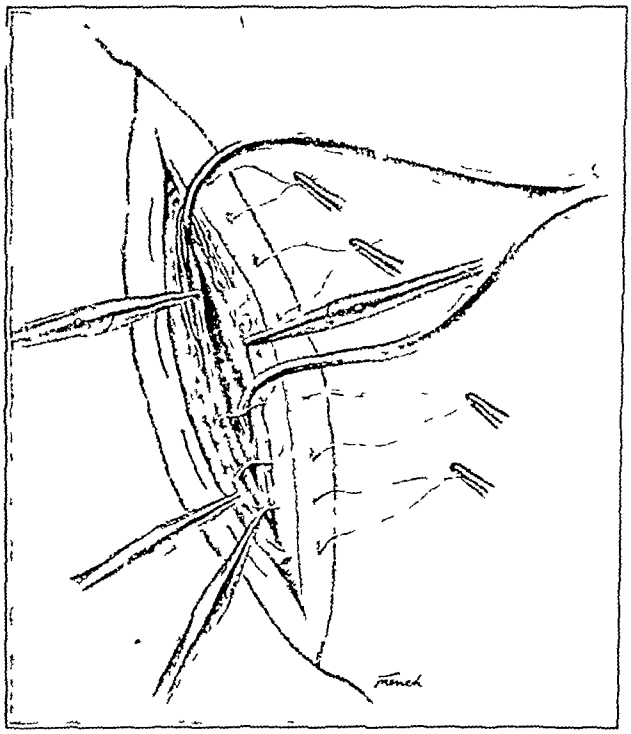

Fig 5—Sutures held out of way by automatic spreader

The after-treatment consists in giving one-half grain of morphin (the tolerance of these patients is always high on account of high metabolic rate) on leaving the table, so that severe after-pain may be avoided It is customary to repeat this dose as often as the

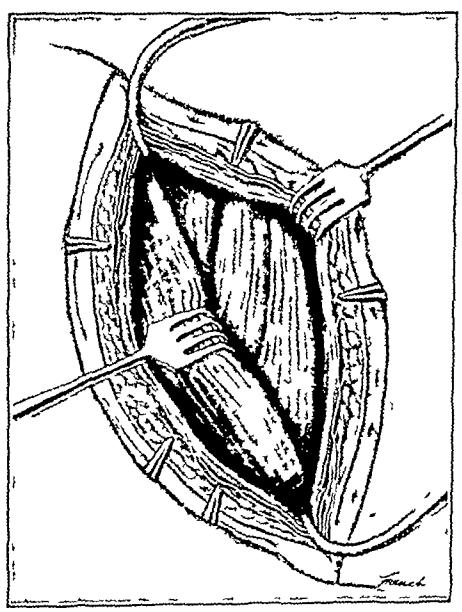

Fig 6—Retraction of sternomastoid to expose ribbon muscles

patient's respiration goes over 20, else restlessness may have the effect of wearing out a damaged heart We have used Crile's ice pack, applied on a rubber sheet over a thin cotton blanket, laid on the patient's right dress This invariably reduces a high temperature at about the rate of 2 degrees an hour, and does much to decrease restlessness We have for many years been in the habit of turning an electric fan directly on all of these perspiring patients, with very much the same result as one gets from the ice pack, having been under the impression that the metabolic rate increases about 10 per cent with each degree of fever *When there is vomiting or inability to swallow*, water is always pushed in the form of hypodermoclysis

The original dressing should not be touched until the postoperative storm, if there be one, is over Strange to say, these patients do not complain of the weight of the clamps, at least they have not complained up to a number of Halsted clamps as high as thirty-four, hence there is no reason to touch them during the first twenty-four hours when, if the patient is quiet, it is our custom to unlock all but those on the superior thyroid and let them fall off in the next few hours by virtue of their own weight This causes no

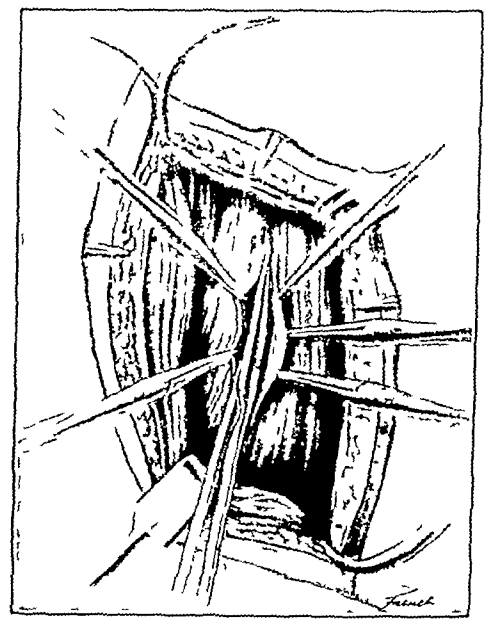

Fig 7—Ribbon muscles split longitudionally

discomfort, provided it can be done with the utmost gentleness The wound is usually found full of serum, when the clamps are removed This is expelled by tissue shrinkage, which follows the removal of the instruments, and the defect is practically obliterated when the skin stitches are tied at the expiration of the second twenty-four hours Some little discomfort always attends this act, but it is distinctly less than that caused by the application of skin wound clips, however, no local or other anesthesia has ever been required at this time One is surprised at the expiration of forty-eight hours to see how little need there is for any form of skin closure The application of adhesive plaster would answer all requirements were it not for the tendency that the lips of such a skin wound show to roll inward

It will be noted that the operation is over as soon as the lobe has been amputated, a fortunate circumstance when it is recalled that the resistance of a toxic patient under local anesthesia is about gone when this stage of the thyroidectomy has been reached This practical observation tends to discount the fact that it is *the-*

orctically far from ideal to leave a large number of clamps in any surgical wound One who entertains the idea for the first time might be justified in thinking of shock, postoperative discomfort, possibility of infection and cosmetic deficiency In practice, the procedure has not worked out thus, on the contrary, the operation has been greatly shortened, perfect drainage has been secured, and there has been none of the hemorrhage that occasionally complicates the tying-off of many clamps In some instances the undertaking is much better borne than was anticipated in the beginning and one is justified in going further and ligating in the ordinary manner, then packing the defect with gauze or with soft rubber, which we consider better However, the gain is very slight, excepting so far as surgical traditions are concerned The longitudinal slit in the ribbon muscles tends to close spontaneously as soon as their function is exerted The sternomastoid slips forward to cover the defect in

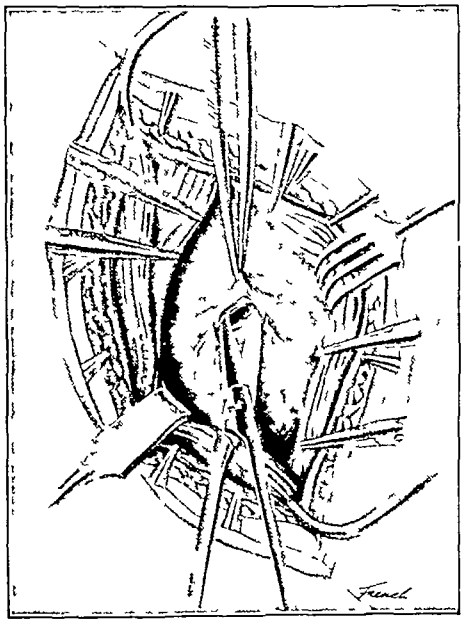

Fig 8—Tumor exposed

them, the thin platysma defect can be disregarded while the skin is closed well enough for all practical purposes by the tying of the few sutures which were introduced at the operation and left long for that purpose

Limitations on time and space prevent one's going into details of clinical histories I can state, however that the early postoperative period has been rendered so comparatively free from toxic symptoms by this technic as to make one feel justified in resecting one lobe on a considerable percentage of patients who were formerly not thought able to bear the operation as performed in the commonly accepted manner

410 Metropolitan Building

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS MASON, LAHEY, EASTMAN AND BARTLETT

DR HENRY S PLUMMER Rochester Minn Dr Lahey's general analysis of the goiter situation was in line with my views A basal rate of plus 15 or 16 can be accepted as meaning that the case is one of hyperthyroidism with adenoma That does not apply to exophthalmic goiter The risks of goiter are evident largely in the case of patients who have been hyperthyroid for more than a year We must learn not to wait until the patient is a bad surgical case before we

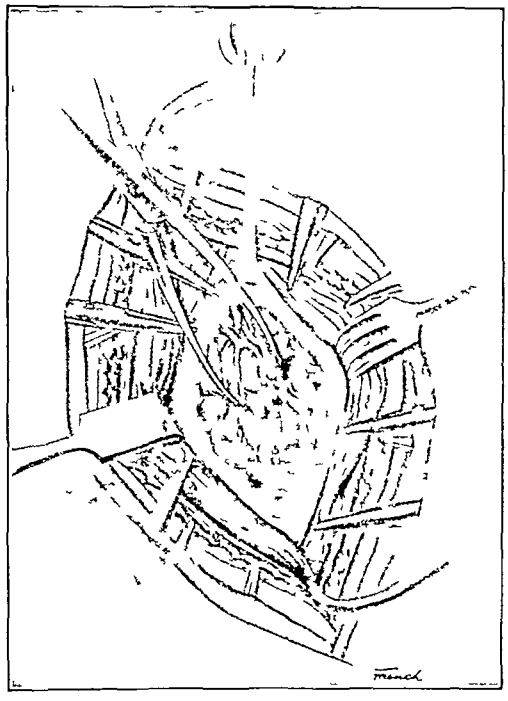

Fig 9—Defect flooded with alcohol to seal up tissue spaces

operate Sixty-five per cent of the cases come to us in the first year A relatively small percentage of the mortality comes from that 65 per cent Postoperative reaction,

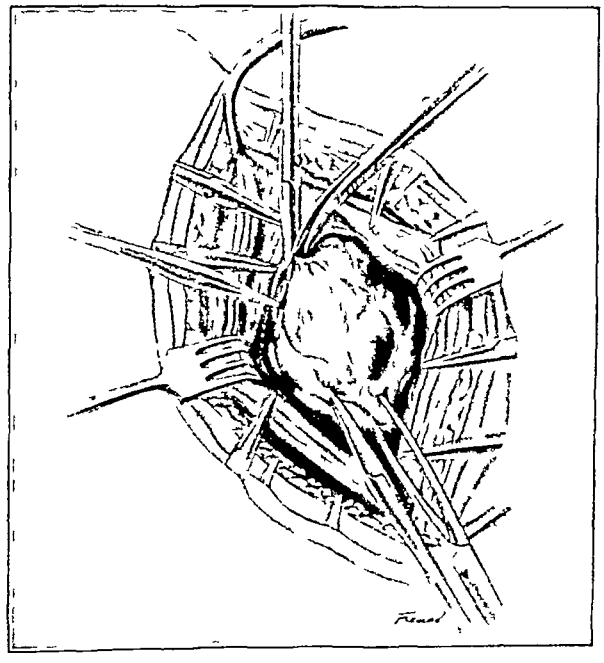

Fig 10—Upper pole divided

the so called postoperative thyroidism raises the question whether a patient can stand this sudden discharge of thyrotoxins into his system We do not even definitely know the crucial point on which this postoperative reaction depends

Until we do know that, we will not know the line of attack which will bring the highest benefit

DR EMIL GOETSCH, Brooklyn Dr Mason brought out some interesting points with regard to partial reduction of hyperthyroidism I should like to know why he prefers the

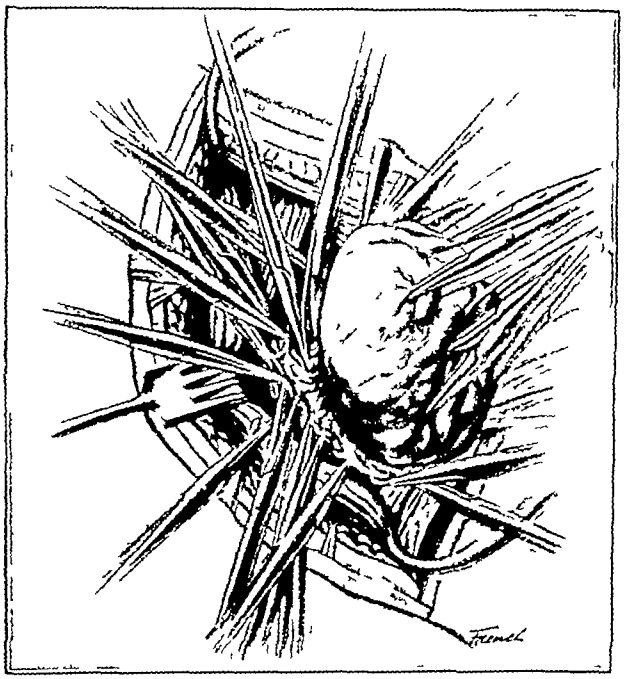

Fig 11—Stump divided from above downward

repeated use of the cautery instead of ligation The theory of partial reduction of hyperthyroidism consists largely in the destruction of gland substance or in reduction of its vascularity After all, secretion of the gland depends on its blood supply I cannot quite see why it is preferable to redevelop the operations which are more mutilating I think that repeated cauterizations are less advantageous than single quick ligations With regard to the neatness of ligation, I have never been able to convince myself that the cautery is preferable Dr Lahey has called attention to the very definite aid which the roentgen ray affords in the diagnosis of adenoma cases I have made use of the roentgen ray in some cases and have been able to confirm our suspicions that a deep adenoma was present With regard to the origin and mechanism of these intrathoracic growths which he mentioned, occasionally a growth of this kind seems definitely to have its origin in accessory thyroid tissue In certain instances there is no connection between these growths and the thyroid In one instance its structure was the same as a demonstrated accessory thyroid at a higher level in the neck The new tumor had an independent blood supply It is well worth remembering this possible origin of these accessory tumors In one case of acromegaly a large colloid goiter originally was situated in the neck, but with the enlargement of the shoulder girdle, this tumor descended into the mediastinum and was not even palpable above the jugular notch If the psychic element in thyroid operations is so important, particularly in exophthalmic goiter, as claimed by Crile, I cannot understand why one should resort to local anesthesia in exophthalmic goiter cases in which procedure the psychic element certainly is present to disturb the patient I have repeatedly noticed a preliminary pulse rate of 140 or 160 fall to 110 or lower under the anesthetic and remain so during the course of the operation This is evidence of considerable value to show that as far as the stimulating effect on the pulse is concerned the patient is apparently better off under a simple general anesthetic than under a local anesthetic As far as the pulse may be considered an index of toxicity, there is less of the latter under nitrous oxid-oxygen anesthesia than when a local anesthetic is employed

DR EDWARD G JONES, Atlanta, Ga If some medical men are inclined to discredit thyroidectomy and to criticize early operators in this field, they ought to keep in mind that these pioneers had to grope their way carefully to discover the proper margin of safety These early operators were justified in their caution to remove too little rather than too much thyroid tissue, so that if they had to operate on some patients a second time this circumstance is not a reflection on their judgment I have never seen a patient who suffered from having had too much thyroid tissue removed at operation, though I am well aware that there is a line of danger, and that such a statement ought to be made with circumspection Patients have not come back for so-called recurrences It is true that in some patients I have left one side because it seemed bad judgment to tax them with a double resection These patients ought to have had a second operation, but usually declined it because of the improvement gained from the one sided operation Dr Bartlett's procedure is a commendable effort to provide one more way of handling satisfactorily the class of patients for which he recommends it It is doubtless true, as he says, that this operation does some violence to cosmetics, and is a little iconoclastic as to the traditions of surgery, but we must remember that the individual under consideration is not much concerned about a scar in the neck, and takes only an academic interest in the traditions of surgery Anociation should begin the very first time the patient comes under observation, and be continued throughout the whole care of the patient Goiter is relatively rare in the South The incidence in the colored race is undoubtedly smaller than in the white race. A nontoxic goiter does not usually compel an individual to consult a physician, and the negro does not do it One third of our colored patients had exophthalmic goiter

DR A J OCHSNER, Chicago You will find a great deal of satisfaction in following the advice that Dr Bartlett has given in a certain series of cases similar in character to those which he has described Most of you will share his doubt about the wisdom of leaving on the clamps The amount of shock avoided by the few moments of taking off clamps will

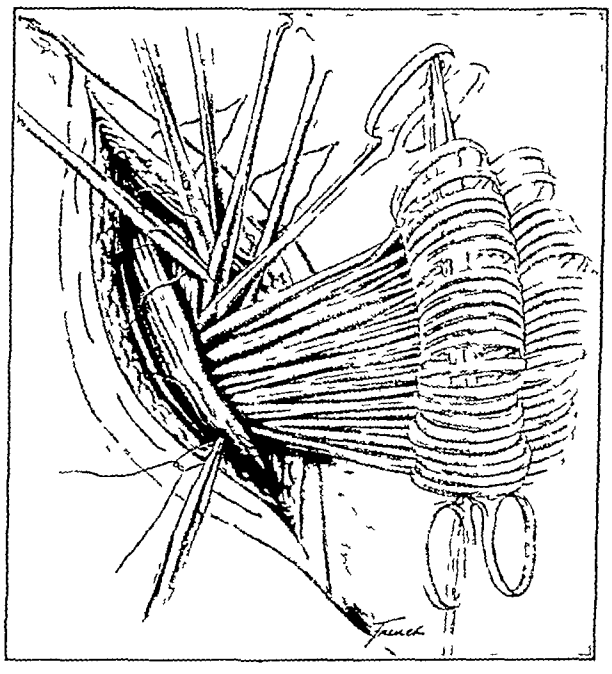

Fig 12—Clamps left in place on superior thyroid and stump

usually be greatly multiplied by the annoyance of leaving them on We have compared hundreds of cases operated under local and general anesthesia, and, as a rule, the patient operated on under local anesthesia is less badly off on the day after the operation than the one who has been operated on under general anesthesia However, we have found that

by performing gastric lavage with water at 105 F immediately after the operation in cases in which general anesthesia was used, these patients are almost in the same condition afterward as those that have had local anesthesia As a rule, we perform all goiter operations under local anesthesia at the present time provided there is no reason why we should not do it, that is, if the patient is not excessively afraid of the local anesthesia With regard to substernal or subclavicular goiters I wish to refer to a procedure which you may find convenient to employ at some time In a few of these cases, before I made use of this precaution, the patient gave a sharp cough after the tumor had been delivered and burst the pleura which caused me much worry Now I immediately place a moist sponge in the space produced when the goiter is lifted out of its substernal or subclavicular location and then go on with the operation The explanation which Dr Lahey has given about the goiter being forced down by the strong anterior muscles is an excellent one In cases in which the goiter was poststernal and post clavicular we have found that usually the anterior muscles are especially heavy, and it has been so in many of these cases in which in the earlier times we considered the goiter too small to give rise to the symptoms which existed I believe every close observer has confirmed what Dr Mason said about the late conditions of the heart due to hyperthyroidism Landstrom brought out this fact fifteen years ago, that degeneration, once it has occurred in the heart, will not disappear, and the advice Dr Mason has given is absolutely correct In order to avoid that degeneration we must operate early

DR. ANDRE CROTTI Columbus Ohio I have operated in more than 1,000 cases of goiter of all forms In the last 500 cases, the death rate was about 2 per cent The anesthetic used was ether-oxygen In dealing with intrathoracic goiters, one must have a complete knowledge of the anatomy of the region, one must be sure to locate the right plane of cleavage otherwise only disasters will be encountered No attempt ought to be made at delivery of an intrathoracic goiter before the upper pole has been entirely ligated cut off and the whole lobe isolated as far down into the thorax as possible This procedure is very important because in many instances the connection of the intrathoracic with the cervical lobe is a very thin one It may be the only hold that one may have to pull on the goiter When the time of delivery is reached, go very gently around the goiter and separate it from the mediastinal organs especially the blood vessels, and only then shall we attempt the delivery of the goiter itself Now, either the goiter is small enough to go through the superior opening of the thorax and then the delivery will be very easy or it is too large and at that critical time of the operation an unpleasant complication occurs namely choking So far as anesthesia is concerned in those cases one must be guided entirely by the condition of the goiter and of the patient If the goiter is accompanied with bronchitis catarrh dyspnea, or marked compression on the trachea, then local anesthesia ought to be used It is in these cases that choking spells are apt to occur in the early part of general anesthesia and one must be prepared to meet the situation In the majority of cases, however, ether or nitrous oxid will do well

DR MALCOLM L HARRIS Chicago Operations on the thyroid under nerve blocking is one of the most satisfactory procedures in the field of local anesthesia The region should be blocked by bilateral blocking of the cervical plexus which may be done very easily by a single needle puncture on either side of the neck Under this method of blocking the entire anterolateral region of the neck is completely anesthetized and any operation in this region may be done without pain Concerning the psychic effect of operations on goiter even the toxic variety, this is largely in the mind of the operator and not in that of the patient The patients under complete blocking will have no psychic effect and if properly handled by the surgeon the patient will leave the table in infinitely better condition than under any general anesthetic with which I am acquainted Recovery is easier and shorter and in place of local anesthesia being a step backward it is one of the greatest steps forward introduced in operations on the thyroid as it is in operations on other regions of the body where it is applicable

DR GEORGE W CRILE Cleveland I have found objections to using local anesthesia alone on account of the important psychic factor there are objections to using general anesthesia alone because in serious cases of exophthalmic goiter there is so great an interference with the interral respiration that inhalation anesthetics may cause much injury by added suboxidation Therefore, in serious cases we take the operation to the patient in bed Using local anesthesia with analgesia under nitrous oxid does not interfere with the internal respiration of the cells This plan has succeeded remarkably well Also in certain cases we allow the wound to remain open in order to prevent the absorption of toxins from the wound and to promote postoperative comfort A comfortable patient is more likely to make a good recovery The important note I gathered from these papers was that the operators have found that it is important to conserve to the utmost degree all the resources of the patient and to add other factors of safety by good judgment, by a graduated operation by doing the right thing at the right time by local anesthesia by general anesthesia Thus they have been able to achieve great progress in the surgical treatment of exophthalmic goiter

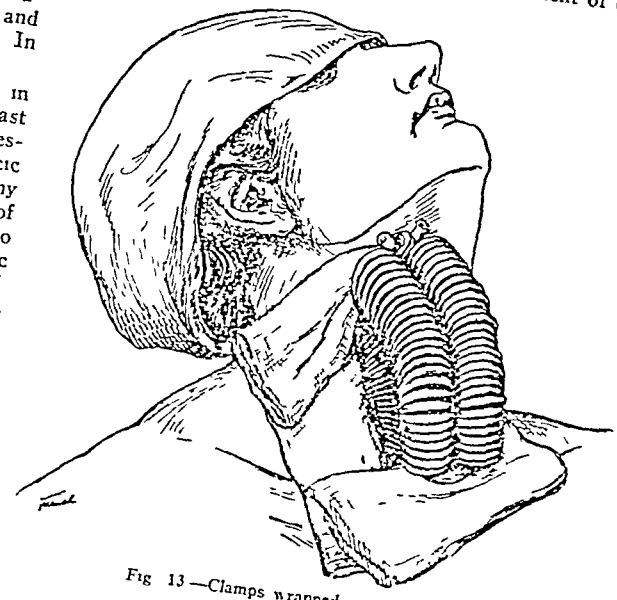

FIG 13.—Clamps wrapped with dressings.

DR. J TATE MASON Seattle We do not repeat cauterization if the patient is a safe risk for ligation The cauterization is not done twice in the same place We follow a line which eventually is removed by the thyroidectomy incision The scars will be lost in the one continuous scar that is made when the thyroid is removed I felt somewhat uneasy in reporting such a large percentage of cases of reoperation They were our earlier cases of six or seven years ago

DR FRANK H LAHEY Boston An important diagnostic point of intrathoracic thyroid is deviation of the trachea to one side One other point regarding the handling of these intrathoracic masses is the danger of injury to the recurrent laryngeal nerve There must necessarily be some cases in which injury will occur since manipulations are naturally digital and the course of the nerve is often markedly distorted It is therefore wise to explain this possibility to the friends or family before operation is undertaken

DR JOSEPH R EASTMAN Indianapolis Dr Crotti and Dr Crile struck a very important note Local anesthesia is of great value and is especially applicable in the bad cases These are the cases which concern us most If a man uses local anesthesia habitually and has become accomplished in its use then he will be the better prepared to deal with the serious cases in which its use is demanded I am pleased to have the endorsement of local anesthesia by Dr Harris

Clinical Notes, Suggestions, and New Instruments

DEATH FOLLOWING INTRAVENOUS INJECTION OF ONE CUBIC CENTIMETER OF RHEUMATISM PHYLACOGEN

MERVIN T SUDLER M D ROSEDALE KAN

A trained nurse, aged 57, acting as hospital superintendent, had suffered from rheumatism, particularly of the knee joints, for the last five years Her nose had been examined and operated on and her teeth had been extracted over a year before, with a resultant small amount of relief, but she still experienced a great deal of pain and difficulty with her knee joints In December, desperate from her suffering and lack of improvement, she secretly accepted the advice of a salesman (who is a graduate physician) who visited the hospital from time to time and who recommended phylacogen, in addition to the measures recommended by her regular physician on the hospital staff

The phylacogen was administered by a graduate nurse, according to the directions of this salesman About January 20 1 minim, diluted with physiologic sodium chlorid solution, was given subcutaneously About January 24, 3 minims, diluted with physiologic sodium chlorid solution were given subcutaneously About February 2 8 minims were given subcutaneously No general reaction followed any of these doses The first dose given intravenously was on February 7, when 0 125 c c, diluted with physiologic sodium chlorid solution was given It was then given intravenously every day for about two weeks the directions being to use in slightly increased doses, provided no reaction followed If there was any reaction the same amount was repeated the following day, and no reaction would occur There was an occasional rather severe reaction but usually only a mild one At the end of about two weeks 3 c c were given Then because of frequent reactions the dose was ordered decreased until no reaction followed, and given only one every other day This was done to February 29 The patient had not felt well all day, and at 7 o'clock her temperature was 100 4 At this time, she took 10 grains of acetylsalicylic acid At 10 o'clock, 1 c c of phylacogen was given Following this dose of phylacogen, the nurse caring for her stated that she had a chill lasting for twenty-five minutes She then complained of shortness of breath ,and began breathing hard Her breathing then became irregular and shallow The heart was very weak and irregular She was apparently nauseated just before she died, one and a half hours after receiving the medication

The nurse, in giving this medicine, carried out the instructions of the physician, who was the representative of the firm manufacturing the phylacogen

The patient had no valvular heart lesion and had never had any symptoms referable to her heart previously

A METHOD FOR DEMONSTRATING SPIROCHAETA PALLIDA IN REGIONAL LYMPH GLANDS

EDWIN W SCHULTZ M D STANFORD UNIVERSITY CALIF

The importance of establishing an early diagnosis in syphilis is clearly recognized by every one The most useful means that we have for arriving at the earliest possible diagnosis is undoubtedly by the dark field method However, occasionally difficulties are experienced in obtaining proper specimens for such examinations For example, not infrequently one receives patients for dark field examination who before consulting their physician have applied some drug to the lesion in question In the army it was not uncommon for men to apply calomel ointment on newly appearing genital sores before their nature could be established by medical examination Naturally such treatment makes the demonstration of *Spirochaeta pallida* at least on the surface of the lesion quite out of the question Fortunately, the presence of the spirochete in the deeper tissues can frequently be still discovered in these cases by puncturing the base of the lesion in the same manner as I shall describe for demonstrating their presence in lymph glands Should this fail to reveal the organism, and the regional lymph glands show even a slight enlargement, their presence may then generally be discovered by puncturing the involved glands This much is not especially new, but I should like to point out a modification of the method ordinarily employed which has proved to be far more efficient in my hands Merely puncturing a gland with a hypodermic needle and making suction with the syringe, without first injecting into the gland a small quantity of fluid, as is generally done, gives comparatively poor results The method here described will reveal the presence of *Spirochaeta pallida* in the lymph glands in practically every case of untreated syphilis

METHOD

A 2 or 5 c c hypodermic syringe with a sharp needle is employed Into the syringe is drawn from 0 5 to 1 c c of sterile physiologic sodium chlorid solution The gland is firmly fixed between the two forefingers and thumb of the left hand and with the syringe in the right hand the needle is passed through the overlying skin and then gently through the capsule of the gland The point of the needle is then rotated in order to break down some of the gland tissue After this has been done the saline solution is slowly injected into the gland, and the capsule sewell under the fingers is noted, after which the point is rotated a few times more Suction is then made with the plunger of the syringe and as much gland-pulp mixture is withdrawn as is possible, but a few drops are generally quite sufficient Several slides are prepared for dark field examination, special care being taken to select thin slides and cover-slips and prepare the specimens in films of practically capillary thickness The sort of dark field technic is all important In general, the entire procedure of procuring the specimen should be aseptic and carefully done

The modification has proved especially valuable in establishing an early diagnosis in certain cases, and has been employed without any noticeable ill effects on the patients

INDUCTION OF LABOR BY AN UNUSUAL METHOD

GEORGE L BRODHEAD M D NEW YORK

Mrs A, aged 24 at term in her first pregnancy, was sent to the Harlem Hospital, March 2, 1920 by her family physician, who suspected that she was suffering from toxemia of pregnancy Her chief complaint on admission was edema of the vulva and extremities She had no headache, dizziness, nausea or vomiting, her vision was not disturbed and she had no epigastric pain The urine showed only the faintest trace of albumin The vulvar edema had been gradually increasing for the three weeks prior to her admission

The patient was pallid sat up in bed and was slightly dyspneic, with a systolic blood pressure of 130, and diastolic, 80 The abdomen showed a full term pregnancy with the vertex well engaged in the left occipito-anterior position The fetal heart was 142 and of good quality The vulva showed a very extensive edema, the labia were tremendously swollen, and pitted on pressure, and were so large that the patient could scarcely bring her thighs together The heart showed hypertrophy and dilatation, due to the decompensated double mitral disease The pulse was irregular at times both in rate and in rhythm The lungs showed many rales of all kinds over both chests, anteriorly and posteriorly The patient's general condition was only fair, and as she appeared to be seriously ill, we believed that pregnancy should be terminated Remembering a former experience in a similar case, acupuncture of the vulva was performed March 4, 1920, at 4 p m, with the escape of a considerable amount of edema fluid The patient was immediately improved, slept much better, and felt a great deal more comfortable

At 1 a m March 5, she complained of rather severe pains in the back and lower abdomen, and on that day she delivered herself normally of a female child weighing 7 pounds 14 ounces

After her delivery the patient was more comfortable, and the edema of both the vulva and the extremities, which had markedly decreased immediately after the puncture, rapidly disappeared The puerperium was uneventful She left the hospital, March 13, in good physical condition, except for her cardiac disease

The interesting feature in the case was the onset of labor following the puncture of the edematous vulva, obviating the necessity for any intra-uterine manipulation to bring on labor

50 West Forty-Eighth Street

ATROPIN POISONING REPORT OF A CASE

WARREN E FORSYTHE M D ANN ARBOR MICH

A student, aged 22, during an attack of acute rhinitis, asked at a drug store for atropin tablets He was given ¼ grain atropin sulphate dispensing tablets without assurance as to their intended use He stated that he took one at 4 p m and that at 4 30 he noticed marked dryness of the nose and throat This was followed in a short time by muscular weakness and dizziness He took strong coffee and tea at 5 p m

When first visited at 6 p m, the patient was lying down and complained of general weakness and dry throat He was rational, but was very anxious concerning his condition The pulse was 120 and respiration 30 The pupils were dilated A mustard emetic was given, and the patient left at 7 30 p m showing no change except slight carphology

At 8 30 p m the patient insisted on getting out of bed, and made frequent trips to urinate He was given 10 grains of chloral at intervals, but continued to be restless and talk irrationally at times until 9 a m

At 9 30 a m, he was rational comfortable, passing urine normally, and able to read medium print at 16 inches The pupils were dilated and the mouth was dry At 3 30 p m the pupils were dilated, and the mouth was moist He was able to read fine print at 16 inches, and complained only of weakness

At the end of forty-eight hours after he had taken the atropin the pupils were dilated and the patient had some general weakness, otherwise he was in good condition and resumed activity without further trouble

FETAL ABDOMINAL SARCOMA OBSTRUCTING LABOR*

THOMAS D MAHER M D AND A S MUSANTE PH G M D
SAN FRANCISCO

Mrs P, aged 35, Italian, quintipara, had a previously good obstetric history, and as far as could be ascertained the patient passed through the present period of gestation without untoward incident At 5 p m, June 25, 1919, approximately at term, labor started, and at 9 p m the membranes ruptured The pains were normal in nature and the labor progressed satisfactorily until 11 p m, when the head and shoulders were delivered, but further delivery by judicious traction was unavailing Vaginal and intra-uterine examination under anesthesia revealed the fetal abdomen greatly enlarged and causing the dystocia After further attempts at manual extraction had failed the obstetric problem of the reduction in the size of the offending passenger was met by puncturing the fetal abdomen at the ensiform cartilage and extracting an immense tumor, by tearing away pieces with the fingers and hand, until the mass was reduced sufficiently to permit of the passage of the fetus

The tumor was a heterogeneous mass about twice the size of the fetal head grayish with a pinkish framework running through it, and of semisolid consistency

The reports of two pathologists showed the character of the growth to be that of myxosarcoma and its origin was thought to have been the kidney

Thorough examination of the fetal structures was not possible

*Read at the April 1920 meeting of the St Joseph Hospital Staff

THE USE OF SMALL ENEMAS IN CONSTIPATION

LOUIS HENRY LEVY M S M D NEW HAVEN CONN

I should like to call attention to a means which I have been using in combating constipation in cases that have resisted the usual forms of medication by mouth, such as the salines, pills and tablets liquid petrolatum and agar It is the use of soft soap containing either glycerin, turpentine cottonseed oil or mixtures of these one or two teaspoonfuls added to 4 ounces of warm water This is injected directly into the rectum by means of a rubber bulb syringe of 4 ounces capacity This makes a nice method for rapid use and rapid results Occasionally I follow up this enema with another one of a similar amount, of warm water The formula is

		Gm or Cc	Per Teaspoon Cc
℞	Rectified oil of turpentine	5	2
	Cottonseed oil	25	1
	Glycerin	45	2
	Soft soap	45	2
	Oil of peppermint	q s	

I have been able to get some excellent results especially in those cases of rectal constipation mentioned by Alvarez With smaller amounts of the soft soap mixture this method can be used safely in children The treatment of constipation by enemas is an ideal short cut method and should be more universally used

1172 Chapel Street

ELEVATION OF CONJUNCTIVA NEAR LIMBUS PREVIOUS TO CATARACT EXTRACTION

ARTHUR WHITMIRE M D NEW ORLEANS

According to a method that I have used for some time to facilitate making a conjunctival bridge less hazardous I inject about 5 mm of sterile water from a hypodermic syringe under the conjunctiva at the upper limbus, to elevate it as far back as is necessary This I do immediately before making corneal section Many conjunctiva bridges are divided in the making on account of the patient's squeezing, or because the conjunctiva lies too close to the sclera I have employed this additional precaution in not more than twenty-five cases, but find it quite advantageous

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION W A PUCKNER SECRETARY

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE (See New and Nonofficial Remedies 1920 p 264)

Gilliland Laboratories Ambler Pa

Diphtheria Toxin Antitoxin Mixture (Gilliland)—Each Cc of the mixture represents three lethal (Lt) doses of toxin and approximately 3 2 units of antitoxin Marketed in packages of three 1 Cc ampules representing one immunizing treatment in packages of three 1 Cc syringes representing one immunizing treatment also in packages of thirty 1 Cc ampules representing ten immunizing treatment

GONOCOCCUS VACCINE (See New and Nonofficial Remedies 1920 p 283)

Lederle Antitoxin Laboratories New York

Gonococcus Glycerol Vaccine (Lederle)—A suspension of killed gonococci in a vehicle composed of glycerol 66 per cent physiological solution of sodium chloride 30 per cent and trikresol 1 1 per cent The product is supplied in packages of 15 vials containing proper amounts of gonococcus glycerol vaccine and 15 vials of sterile diluent with which to make the proper dilution of the vaccine Each 1 Cc contains of 0 1 Cc of gonococcus glycerol vaccine (the remainder consisting for each 1 Cc) and 0 9 Cc of sterile physiological solution of sodium chloride After dilution the doses (1 to 15 300 400 500 600 700 800 900 1000 11 million killed gonococci respectively

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SATURDAY, JULY 17, 1920

PROHIBITION AND THE MEDICAL PROFESSION

If one were to take seriously the newspaper jokes and gibes regarding the prescribing of whisky by physicians one might assume that the medical profession had lost all honor Any self-respecting physician must blush for shame at what he regards as slanders on his profession Unfortunately, however, the charges are apparently true, so far as they apply to some physicians The office of the Federal prohibition enforcement officer for Illinois contains sufficient evidence to establish the truth of the reports, so far as they concern a not inconsiderable number of physicians

As is well known, the regulations governing the prescribing of intoxicating liquors require that prescriptions shall be written on regular blanks provided by the government, which are issued in book form Each of the books contains 100 blanks, with corresponding stubs On these stubs must be written the date, the name of the patient, the amount of whisky prescribed and the disease for which it is given These stubs are a record of what the physician has prescribed during a certain period Before obtaining a new book, the physician must return the stubs of the old one Examination of these stubs reveals that some physicians have been writing from seventy-five to 100 prescriptions for whisky a month The stubs of a dozen different books examined at random show that in no single instance was the prescription for less than the maximum quantity allowed by law—one pint, or sixteen ounces An analysis of ten books—one thousand blanks—shows that the diseases given as the reason for prescribing whisky were bronchitis, 354, general debility, 167, la grippe, 163 Boils, coryza, diabetes, nephritis, endocarditis, eyestrain and headache, hay-fever, nasal catarrh, rheumatism and urinary irritation were some of the other disease conditions for which whisky was given

Undoubtedly, the conditions in Chicago are duplicated to a greater or less extent in other cities Naturally, the proportional number of physicians who are selling their rights and privileges as members of an honorable profession for "a mess of pottage" is very small, but that even a small number of physicians could be so lacking in honor reflects on the profession as a whole Our profession has always been regarded by the public as an honorable one Its members are presumed, by the very nature of their calling, to be upright and dependable Physicians are, in a sense, a privileged class, as is emphasized in the laws of all civilized nations With the privileges go certain responsibilities and obligations which every physician, tacitly at least, assumes when he enters the profession It is such a privilege that was conferred on him by the government, under the laws enforcing the principles of the Eighteenth Amendment to the Constitution of the United States These privileges were granted on the assumption that there might be times when physicians would need to prescribe intoxicating liquor for sick persons It is beside the question as to how many prescriptions for liquor any physician may need to write in a certain length of time It is obvious—there is no denying the fact—that some physicians are grossly abusing their trust in this matter The privileges were granted to physicians with the presumption that they would use them honorably, and would prescribe intoxicating liquor only when absolutely necessary—if such necessity ever exists [1]

The whole question is a serious one which should, be faced frankly by the organized profession It is one which merits the immediate attention of county medical societies throughout the country Already physicians in many communities have taken action defining their attitude toward those physicians who have traded an honorable name for the unworthy title of "bootlegger" For the good name of our profession, it should be made known to the public in an emphatic manner that such disreputable practices, on the part of any physician, are not condoned Noblesse oblige

TISSUES FUNCTIONALLY EQUIVALENT TO THE SUPRARENALS

Two facts with respect to the physiology of the suprarenal glands have become generally accepted, namely, that these structures are indispensable to life, and that extracts of them, or the epinephrin obtainable from them, can exert very pronounced physiologic effects on the body Whether the latter potency is a common mode of altering the bodily functions during life, that is, whether the suprarenals exhibit an important internal secretory activity under the normal conditions of existence, has been somewhat debated The enthusiasm for the earlier belief that vasomotor tone and other essential phenomena are continually

1 In the words of the law No physician shall prescribe liquor unless after careful physical examination of the person for whose use such prescription is sought or if such examination is found impracticable then upon the best information obtainable he in good faith believes that the use of such liquor as a medicine by such person is necessary and will afford relief to him from some known ailment,'

regulated by an internal secretion of the suprarenals has waned The once asserted relationship between nephritis or arteriosclerosis and suprarenalemia is no longer emphasized by experimental investigators, and the various assumed interreactions between the suprarenals and other systems of gland structures in the body cannot yet be outlined in a convincing way

The foremost evidence for the indispensability of the glands consists in the results of extirpation experiments, which are quickly fatal in most species The fact that the majority of patients who succumb to Addison's disease show a bilateral destruction or atrophy of the suprarenal glands favors the view that this malady is due to some sort of insufficiency of these structures Epinephrin, which has long been regarded as the "active principle" of the suprarenals, is produced in the medulla of the glands Since administration of epinephrin as a rule fails to stay the course of Addison's disease, the question has arisen whether the cortical portions of the suprarenals do not also play an important physiologic part Furthermore, chromaffin structures analogous in character to the suprarenal medulla are scattered in small masses through other parts of the body If they are functionally equivalent to the suprarenals, it can be understood why persons may survive apparently severe pathologic changes in the glands

This suggestion that chromaffin tissues located elsewhere than in the suprarenals may act in a way compensatory to the latter is suggested by the report of an unusual case observed by Strauss [1] in Berlin The history of the patient showed the classic picture of Addison's disease, which had not covered a period of more than six months The necropsy, however, disclosed an entire lack of suprarenal glands No vestiges of them could be discovered As the absence of any detectable residual structures made it seem unlikely that the suprarenals had been present in the months immediately preceding death, Strauss has concluded that the remaining parts of the chromaffin tissue in the body must have functioned in some way for a long time to maintain the physiologic activities for which the suprarenals ordinarily are primarily reponsible Perhaps the situation can best be summarized, from the results of this unusual case, by noting that the suprarenals per se are only a part, though probably the overwhelmingly most significant portion, of a larger system of essential tissues Since these nonsuprarenal structures may be functionally equivalent in some measure to the suprarenals, as Strauss' findings seem to suggest, it becomes important to learn more about the distribution and performance of the tissues responsible for prolongation of life when the suprarenals themselves are severely involved

1 Strauss H Angeborenes Fehlen beider Nebennieren und Morbus Addisoni mit kritischen Betrachtungen zur Biochemie des Adrenalsystems Biochem Ztschr **79** 51 (Jan) 1917

SOCIAL WORK FOR THE HARD OF HEARING

Specialism develops a tendency toward the elimination of the intimate personal relationship between physician and patient which existed when the family practitioner was the only type However, there has been developing among physicians a social mind, and the specialist of today is beginning to realize that it is his duty to "see the patient through," and lend his aid to restore him, not only physically, but mentally, economically and socially, as nearly as possible, to the best position he is capable of occupying in relation to other human beings In other words, the physician's duty does not end when he has done all he can to correct the physical disability Manifestations of the newer spirit are evidenced in great surveys now being made as to the number of physically handicapped persons in various communities, in the organization of service leagues for the handicapped, and in the creation of institutes for vocational education and of bureaus for propaganda to interest the public in this altruistic work

A particularly difficult problem is that of the care of the deaf, including those who suffer from speech defects As is beginning to be recognized, this class of disabled persons is peculiarly hypersensitive Through repeated failures to secure relief and through impositions practiced on them by the unprincipled, they have become suspicious of all efforts toward their improvement In a recent symposium before the Section on Otology of the New York Academy of Medicine, Dr Wendell C Phillips called attention to the fact that the physician is frequently unable to supply more than palliative measures in these cases The deafness is progressive, and with the increasing deafness, there appears an increasing depression of the patient's spirit, inclining him to believe that his life will be useless and, in some instances, leading even to suicide It is in such cases that the application of otologic skill is the minor phase of treatment "The otologist," according to Dr Phillips, "should not be only the otologist, but the wise counselor, treating his patient as a client whose comfort and happiness he should safeguard equally with that of his physical infirmity He should be prepared to warn him against the pitfalls of despondency, of charlatanism both inside and outside of the medical profession, and to conserve his finances by warning him against responding to advertised quackery in every form He should encourage him to accept his fate as his peculiar 'thorn in the flesh,' and to have no fear in letting his friends become aware of his infirmity In other words, deafened people should be warned against their arch-enemies, hypersensitiveness and despondency"

The simple warning in itself, however, is not sufficient Despondency must perforce increase, unless the patient is pointed to a way out— he is shown

how he may remain or become a useful citizen Much of the sensitivity of the deafened person is dependent on the fact that he must utilize unusual devices for hearing or for communicating his thought He should be made to understand that through the discovery and encouragement of the art of lip reading, these extraneous and conspicuous methods have been largely done away with The physician should be able to direct the patient to some of the many leagues or organizations now existing or being formed in most of our principal cities under the leadership of the central Association for the Hard of Hearing, which teach this art to the deafened worker, and where special classes are held to enable the deaf to study lip reading together, thus giving them confidence in their ability [1] Through practice they lose their hypersensitivity and nervousness, and become almost as proficient in hearing through the eye as is the ordinary person using the normal organ for this purpose Furthermore, through special employment bureaus, situations are secured for deafened workers, especially adapted to their infirmities It may be pointed out that the deaf employee does not waste time in conversation, and that, through his infirmity he is attached to his situation, so that he is not continually changing from one occupation to another

There are few fields of philanthropy which will pay so highly in the reward of successful accomplishment as will aid to those physically handicapped when given in the manner described The mere bestowal of charity serves to increase sensitiveness and to stimulate pauperization Instruction and aid which cause the handicapped to become producing members of society develop ambition and happiness, decrease sensitivity, and thus are a real charity

1 Complete information may be obtained by writing to the New York League for the Hard of Hearing 126 East Fifty Ninth Street, New York City

FURTHER NEW ZOOPARASITES OF MAN

Only a few years ago the search for new varieties of bacteria in their possible relation to disease was one of the foremost activities of the pathologic investigator Discoveries in the domain of bacteriology had demonstrated the profound importance that they might assume in the problems of medicine With the growth of knowledge regarding the role of bacteria in the genesis of specific diseases, the finding of new microorganisms has become less frequent in occurrence Indeed, the proof of the etiologic association of some heretofore unrecognized species of bacteria with an old malady has come to be a comparative rarity in medical investigation On the other hand, other types of parasites, notably those of animal origin, are beginning to awaken more and more interest, so that animal parasitology is claiming a larger share than ever before in the field of pathologic research

From a popular standpoint, the story of the hookworm has probably been most widely heralded But uncinariasis is only one of many harmful manifestations of the zooparasites of man Fecal examinations conducted in all parts of the world of late, particularly by the medical officers active in the World War, have disclosed an unexpected incidence of parasitic invaders, some of which have more than intestinal or purely local effects on their host One of the latest finds is reported from the Chosen-Government General Hospital at Seoul [1] It refers to a species of *Rhabditis*, temporarily designated as *Rhabditis hominis* n sp, a viviparous parasite found numerously in the freshly passed feces of schoolchildren Heretofore most species of *Rhabditis* and its allies have been found free living in the earth and decayed vegetable matter, although a parasitic specimen in man has been reported Best authenticated is the rhabditiform larva which was found in 1882 by Nielly in cutaneous papules, chiefly on the limbs, along with small worms in the blood

In the Korean investigation, seventeen out of 668 schoolchildren examined in one district were found infected with the parasitic worms of the new species In another place, three cases were discovered among 471 pupils In a number of these young people the worms had passed out of the body in the course of two or three months without any medical treatment This suggests that, perhaps, *Rhabditis hominis* may not be a true parasite, but may have happened to find temporary or accidental lodgment in the human body The Japanese discoverer [1] regards it as highly probable, however, that the worms can thrive in the human alimentary canal, because they were found abundantly and in all stages of their development The nematode reminds one, in some ways, of possible infections with *Strongyloides stercoralis*, which has rhabditiform embryos and has been found not only in the Far East, but even in the United States Strongyloidosis has been alleged to occasion a variety of intestinal disturbances The new worm found in Korea cannot be mistaken for *Strongyloides stercoralis*, because in contrast with what occurs with the latter, eggs of the rhabditoid worm are not found in the feces It is not unlikely, according to Kobayashi, that the two species have been confused in the past in descriptions of nematode infections of the alimentary tract

Another recent acquisition to the list of animal parasites of man is a small biflagellated protozoon found in smears and cultures from patients dead of influenza in an army camp The organisms were spherical or pear-shaped, possessing two free flagella and a kinetonucleus They are regarded by their discoverers [2] at the base hospital of Camp Zachary Taylor, Ky, as accidental invaders of the body, rather than pathogenic in character

1 Kobayashi H On a New Species of Rhabditoid Worms Found in the Human Intestines J Parasitol 6 148 (March) 1920

2 Wright T and Lucke B A New Biflagellated Protozoon of Man J Parasitol 6 140 (March) 1920

Current Comment

THIS YEAR'S FOURTH OF JULY CELEBRATION

It will be recalled that from 1903 to 1916, inclusive, THE JOURNAL conducted a campaign for a safe and sane celebration of the Fourth of July Facts and figures were gathered and published each year showing the various casualties that resulted from the method of celebration then prevalent Ultimately the annual holocaust of deaths and injuries, together with the noise and hubbub due to the use of death-dealing fireworks, gave way to a safe and sane celebration By 1916, the annual number of deaths from tetanus had been reduced from 406 to none and other fatalities reduced to a minimum THE JOURNAL felt that its object had been accomplished and the publishing of statistics was discontinued Newspaper reports of the celebration this year indicate that there has been a serious relapse into the old conditions Many deaths and large numbers of serious wounds are reported Of the deaths, several were due to the supposedly harmless sparklers Of the injuries, the more serious, as usual, were caused by cannon crackers It is still too early, at this writing, for reports on tetanus, but it can be predicted that with a return to the use of high explosives in the celebration of the Fourth of July there will be a return of mutilation injuries and fatalities with increased possibilities for tetanus Will it be necessary to learn our lesson over again?

MULTIPLE EXOSTOSIS

Cartilaginous exostoses have been among the rarer phenomena coming to the attention of physicians The roentgenographic method of observation has greatly increased the possibilities of detecting these abnormalities of growth, so that what is at present a clinical rarity may presently be found more common than is currently suspected It has happened more than once in the history of medical diagnosis that the introduction of more accurate methods of observation and analysis or forceful publicity by striking descriptions of unusual anomalies has resulted in bringing them to light in unanticipated numbers of cases Perhaps this will prove to be the outcome of the present interest in exostoses Honeij [1] has recently correlated the findings in sixty-six reported cases of multiple cartilaginous exostosis with the result that certain theses seem to be presented with clearness if they are not, indeed, definitely established Apparently the disease involves well defined metabolic disturbances, if one may judge by the alterations in the metabolism of calcium and magnesium found by Underhill and Bogert The excretion of the alkali earths shows a tendency toward abnormally large values, particularly when the intake is inadequate Malformation and deformities occur at an age not yet determined, owing to arrest in growth of the skeleton and to bone growth arising at such points as to interfere with the normal growth and direction of the bones The exact nature of the objectionable growths cannot be properly ascertained until more examinations are made at different ages and developmental periods According to Honeij there is no evidence that infection plays a part in the etiology, but since a positive relation through heredity was obtained in thirteen of thirty-three cases, the disease having occurred in some member or members of the patients' families, he believes that hereditary factors are concerned The numerous roentgen-ray observations now made daily on hundreds of persons may be expected to increase knowledge of the exostoses in rapid order

1 Honeij J A A Study of Multiple Cartilaginous Exostoses Arch Int Med 25 584 (June) 1920

NEW MEDICAL SCHOOLS

In times past reports regarding the establishing of new schools of medicine have caused some anxiety among those interested in the development of medical education, since the country was already oversupplied with such institutions With rare exceptions, also, the new schools reported were opened without adequate financial backing, or without satisfactory clinical material How different, however, is the news in regard to the medical school to be established by the University of Rochester As reported recently, through the gifts from Mr George Eastman and the General Education Board, this institution will have a total endowment of $9,000,000, which guarantees ample buildings, laboratories and hospital facilities In this connection the news is also welcome that the University of Wisconsin has obtained legal authority to offer a complete four year medical course within the next few years Of the eleven universities now offering the two year medical course, the University of Wisconsin has established the work on the most elaborate scale and is in an excellent position to develop clinical departments of an equally high grade The campaign for the improvement of medical education during the last sixteen years has resulted in reducing the number of medical schools from 162 to eighty-five A vast oversupply has given way to a more nearly normal quantity We can still dispense with several medical schools of a seriously low type, but there is always room for those which are amply endowed, and prepared to teach modern medicine in a practical manner

NEW FACTS REGARDING OPIUM ALKALOIDS

In a series of investigations on the pharmacology of opium alkaloids, Macht emphasized that these compounds could be grouped into two distinct categories, in doing this he [1] defined more clearly the work of Pal, Straub, Sahli, and others One of the categories the piperidin-phenanthrene group, of which morphin is the principal member, includes substances that stimulate the contractions and increase the tonus of smooth muscle The second, or benzyl-isoquinolin, group, of which papaverin is the conspicuous member inhibits the contractions and lowers the tonus of the same active tissue It was through the discriminating pharmacologic analysis that attention became

1 Macht D I Action of Opium Alkaloid J Pharmacol & Exper Therap 7 309 1915

prominently directed to the inhibitory effect of benzyl alcohol and its derivatives, so that they have found some recognition in therapy as antispasmodics On the other hand, Straub's so-called morphin reaction, consisting in a peculiar stiffening or bending backward or curling of the tails of mice which have received doses of morphin, can now be explained as due to the spasms of the sphincters of the anus and bladder provoked by the alkaloid in question As the morphin molecule includes both piperidin and phenanthrene groups, Macht[2] has undertaken to ascertain the effect of these groups separately on smooth muscle The upshot of the research has been to demonstrate the comparative inertness of phenanthrene, whereas piperidin is found to be a powerful stimulant of this contractile tissue, suitable doses causing an increase in the rate and strength of its contractions and an increase in its tonicity Macht asserts that this interesting effect of piperidin on smooth muscle has never before been described Its possible significance deserves further consideration

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION PUBLIC HEALTH ETC)

ARKANSAS

Martin Clinic Organized—Dr E H Martin announces the formation of the Martin Clinic with offices in the Dugan-Stuart Building Hot Springs, and with the following staff Drs Edward H Martin chief of clinic, Ernest A. Purdum, medicine, William G Klugh, neurology, George C Coffey, urology, William F Porter gastrology, W C Minnich surgery, Milton T Edgerton, Jr ophthalmology, W J Fort, roentgenology, and L M Runskequitz, clinical pathology

Personal—Dr Octavius L Williamson, Marianna, has been appointed a member of the state board of health, succeeding Dr Charles M Lutterloh, Jonesboro, deceased——Dr William E McLean has been appointed health officer of Little Rock, succeeding Dr Robert C Foster, who resigned to accept a position as passed assistant surgeon U S Public Health Service, with station at Houston Texas——Dr H H Niehuss, Eldorado for many years health officer of Union County, has also been appointed health officer of Eldorado

Physicians Protest Against Tax—Members of the Garland County Medical Society at its meeting in Hot Springs, July 1 entered a protest against the tax recently levied by the Division of National Parks of the Department of the Interior compelling all physicians who prescribe the hot radio-active baths to pay the government $60 a year The Department of the Interior also has ruled that physicians desiring to take the examination to prescribe the hot baths must pay a fee of $10, and if they pass the test must pay an additional fee of $15

FLORIDA

Bubonic Plague—After several days of freedom from the disease the fourth case of bubonic plague was officially reported in Pensacola, July 7, the patient being a driver for an express company The state health officer has urged the people to assist in the campaign to exterminate rats

ILLINOIS

Personal—Dr Edgar G Merwin Highland, sustained a fracture of the leg in a collision between automobiles June 10, and is under treatment at St Joseph's Hospital Edwardsville——Dr Harry S Holmes of the Lincoln State School and Colony, was stabbed in the back by a young man whom he had reproved for using foul language——Dr Clifford P McCullough, Lake Forest, sustained a severe cut in the face by being accidentally struck with a golf ball

Clinics to Be Established—The Moline city council on July 8 passed an ordinance providing for the establishment of a city venereal disease clinic and for making venereal disease reportable The clinic will be under the supervision of Dr David E Kohler——An all-day clinic was conducted at the Robinson Hospital, June 30, by the medical field director of the Illinois Tuberculosis Association——On June 29, a tuberculosis clinic was conducted at Kewanee by Drs Orville W McMichael Chicago, Russell L Adkins, Springfield, and James W Pettit, Ottawa, under the auspices of the Henry County Tuberculosis Association

Chicago

Explosion in Hospital—Fire which started in the basement of the South Chicago Hospital, July 10, occasioned much excitement and necessitated the removal of thirty-five patients from the building The fire started in the basement and is believed to have been due to the explosion of chemicals None of the patients were injured, but the janitor was seriously burned and may die

Home Nursing School—The sixth session of the training school for home and public nursing opened July 7 The classes are held three times a week and the course lasts eight weeks At the graduating exercises of the fifth course held at the Municipal Tuberculosis Sanatorium, June 29 a proposal to raise a million dollars to make the training school a permanent institution was presented to the board of directors of the institution A class of 478 was graduated

Personal—At a meeting of the Council of the Society of Medical History of Chicago, Dr Morris Fishbein was elected secretary-treasurer to succeed the late Dr Stanton A Friedberg——Dr and Mrs Kellogg Speed sailed for France July 3 Dr Speed is one of the delegates from the United States to the International Surgical Congress which meets in Paris July 19——Dr George G Zoehrlaut has been appointed a special deputy collector of internal revenue, and will have charge of collecting taxes on motor boats in the Chicago district

INDIANA

New Clinics—The City Board of Health of Indianapolis has ordered the establishment of three additional tuberculosis day clinics and one night clinic One of the clinics is for colored people The clinics will be supported by money derived from the special tuberculosis tax levy

Personal—Dr Ira Miltimore has returned to his duties as chief surgeon of the Gary Steel Company Hospital after a three months' trip to Panama and South America——Dr John W Cook Pendleton was stricken with cerebral hemorrhage, June 21 It is believed that he will recover——Dr Thomas O Redden Indianapolis, fell into a cistern at the rear of his house July 3, and was rescued with great difficulty——Dr Gardner C Johnson, Evansville, president of the state antituberculosis association, will act as temporary superintendent of the Boehne Camp after the departure of Dr Thomas Willett, Evansville

IOWA

Public Health Nursing in the University of Iowa.—Beginning with the academic year in September, the University of Iowa will conduct a course in public health nursing, open only to graduate nurses

Alumni Election.—At the annual meeting of the Alumni of Keokuk Medical College, Dr Benjamin S Pennington Hoisington, Kan was elected president, Dr Albert C Armitage, Shenandoah, vice president, Dr Henry C Young Bloomfield, secretary, and Dr Alanson M Pond, Dubuque, treasurer

Personal—Dr Robert E Jameson, Davenport, was operated on at Mercy Hospital, July 1, for gastric ulcer——Dr Grant J Ross, Sioux City has been installed as medical director of the Iowa Department of the Grand Army of the Republic——Dr Jennie McCowen, for more than thirty-five years physician of the Cook Home, Davenport, has resigned

Employee May Choose His Own Physician.—A committee has been appointed by the Dubuque County Medical Society to investigate the statement made by a local manufacturing company that it would not be responsible for bills from any except its own company physician for services rendered its

2 Macht D I A Pharmacodynamic Analysis of Straub's Morphine Reaction J Pharmacol & Exper Therap 15 243 (May) 1920

employees The committee has reported that an employee has the right to choose any physician he pleases under the Iowa workingmen's compensation law

KANSAS

Detention Home Opened —The state detention home at Lawrence was opened June 1 In this institution, girls infected with venereal disease will be treated

State Board Election.—At the annual meeting of the state board of health held in Topeka June 25 Dr Oliver D Walker, Salina, was elected president, Dr William M Earnest Washington, vice president, Dr Samuel J Crumbine, Topeka, secretary and executive officer (reelected for the seventeenth year), Albert J Jewell, chief engineer, and C F Maxcy, state bacteriologist succeeding Dr Sara E Greenfield, resigned

Public Health Association Organized —At the annual meeting of the state board of health of Topeka June 25, the Kansas Public Health Association was organized Rev Edmund J Kulp, Topeka, was elected president, Mr William Allen White, Emporia, and Dr Samuel J Crumbine, Topeka, vice presidents, Dr Charles H Lerrigo, Topeka, state registrar of vital statistics, secretary, and Dr Earle G Brown, health officer of Topeka, treasurer

MARYLAND

Personal—Dr Laurence Hickman, president of the Baltimore City Jail Board underwent an operation for appendicitis recently at the Hebrew Hospital, and is reported to be improving rapidly

Campaign Against Bubonic Plague —Because of the presence of bubonic plague in cities connected with Baltimore through steamship lines, Dr C Hampson Jones health commissioner, has taken steps to prevent the introduction of the plague into Baltimore He will conduct a vigorous campaign against rats and other rodents that carry the disease. The U S Public Health Service has asked all health officials along the Atlantic Coast to prepare to fight the disease

MICHIGAN

Personal—Dr William G Hutchinson, Detroit, was elected third vice president of the Michigan Mutual Life Insurance Company, June 19

Sanatorium Enjoined —An injunction is said to have been granted in the circuit court by Judge Burton of Big Rapids, June 26 against Dr Benjamin A Shepard, Kalamazoo, to restrain him from operating an institution known as the Pine Ridge Tuberculosis Sanatorium

University Notes.—The national research council has reappointed Dr E T Barker to its fellowship in the University of Michigan, Ann Arbor——Dr Ira Dean Loree, associate professor of genito-urinary surgery in the medical school, has resigned——Dr Clyde B Stouffer, assistant physician of the university health service, has resigned——The medical library of the late Dr Enos Church has been given to the university by Mrs Church

Work Against Tuberculosis—Tuberculosis sanatoriums in Michigan now number twenty-seven with a capacity of less than 1,000, while the number of known cases of tuberculosis in the state is approximately 25 000——The clinic division of the Michigan Anti-Tuberculosis Association held four separate series of free clinics in Macomb, St Joseph and Washtenaw counties and on Drummond Island The series commenced, June 14 in Macomb County, June 22 in St Joseph County, July 6 in Washtenaw County, and July 12, on Drummond Island

MINNESOTA

Hospital Staff Organized—The staff of the Fairview Hospital, Minneapolis organized April 28 and elected Dr Henry L Williams president, Dr Oscar Owre vice president, and Dr Frederick J Souba, secretary-treasurer

Research Fellowship Created—A tuberculosis research fellowship in the University of Minnesota to be supported by the Hennepin County Medical Association has been created The object of the fellowship is to encourage research in means for the cure and prevention of tuberculosis and will be for the first year $750, and for the second and third years, progressively increasing amounts

Personal—Dr Elias Potter Lyon, dean of the University of Minnesota Medical School was granted the degree of Doctor of Laws by the St Louis University at its commencement, June 7——Dr Lawrence F Sutton St. Paul, field inspector for the Minnesota Sanatorium Commission, has gone to England to make a study of social conditions——Dr William Friesleben, St Cloud has been appointed coroner of Stearns County——Dr Pierre A Hilbert, Melrose, has been appointed a member of the state board of control

MISSOURI

Hospital Building Started—Construction work on the new Callaway County Hospital at Fulton has been begun and the cornerstone has been laid

Fined for Violation of Narcotic Law—Drs Commodore E Bennett Joplin and John W Jeans, Prosperity, are said to have pleaded guilty to a charge of violation of the Harrison Narcotic Law and to have been sentenced to imprisonment for ninety days and four months respectively in the Newton County jail——The permit of Dr Jeans to practice medicine in the state is said to have been suspended by the state board of health for a period of ten years

New Dispensary—The Albert Benjamin Dispensary Kansas City, was opened June 18, at Admiral Boulevard and Harrison Street It is being operated under the direction of the United Jewish Charities and its objects are the furtherance of science the study of diseases and the instruction of nurses and assistants——A free health clinic has been opened at Carthage under the charge of Drs Cassius M Ketcham, Edward J Burch and Herman A LaForce

Personal.—Dr William L Gist has been appointed superintendent of the Kansas City General Hospital succeeding Dr A W Thompson resigned——Dr William A Clark has been appointed chief of staff and Dr Lawrence David Enloe, secretary of the staff of St Mary s Hospital Jefferson City——Dr Malvern B Clopton, St Louis, has been elected president of the Missouri Association for Occupational Therapy succeeding Dr G Canby Robinson resigned——Dr Porter E Williams has been reappointed superintendent of State Hospital No 2 St Joseph——Dr Hasbrouck De Lamater formerly health officer of St Joseph, has been appointed health officer of Norfolk County, Va and has been succeeded by Dr George M Boteler, St Joseph——Dr W M Lamkin Eugene is reported to be critically ill as the result of a cerebral hemorrhage——Dr James W Bruton, Ozark has been appointed state deputy health commissioner

MONTANA

State Board Building Dedicated—The new building of the state board of health, which has been erected at a cost of more than $50 000 was dedicated July 11 The dedicatory exercises were conducted by Governor Stewart

Health Regulations Circularized—Booklets giving all the necessary data as to the duties of county health officers and methods to be employed by them together with a copy of the state health laws and the new regulations were mailed to all county health officers the first week in July

Public Health Officials Meet—The annual meeting of the Montana Public Health Association was held at the state house Helena July 11 and 12, under the presidency of W N Cobley, state chemist Bozeman In addition to the general sessions there were also meetings of the sections on tuberculosis child welfare industrial hygiene and sanitary and water works engineering

NEBRASKA

Hospital Dedicated—The Lynchburg Hospital was dedicated May 4 by Archbishop Hodges——The Verges Sanatorium Norfolk has been opened by Dr Carl J Verges

Personal—Dr Jacob O Hoffman Orleans has retired after more than forty years practice——Dr John T Standard has been made mayor of Ulysses——Dr Charles A Hull Omaha has been made chief surgeon of the Omaha and Council Bluffs Railway Company——Dr D S Brazda has been appointed instructor in anatomy in the University of Nebraska during the absence of Mr Homer P Latimer professor of anatomy at the university who has been granted a leave of absence for a year that he may study at the Institute of Anatomy of the University of Minnesota

NEW JERSEY

Personal.—Dr Isaac Barber Phillipsburg has been appointed a member of the state board of taxes and assessments——Dr Clarence A Hofer Metuchen who was

operated on recently for appendicitis complicated by gallbladder disease is convalescent——Dr Samuel K Salasin has been elected health officer of Atlantic City, succeeding Dr Talbot Reed, deceased

NEW YORK

Eye Clinic for Watertown—The Visiting Nurse Association has opened an eye clinic to care for children in the schools who cannot afford the services of an oculist

Sanitary Exhibit Installed—The Jewish Agricultural and Industrial Aid Society has installed a permanent exhibit on its property at Ellenville to demonstrate to farmers and proprietors of boarding houses how wells, springs, cesspools, sewage disposal plants and privies should be constructed and maintained in rural districts

Outline Lecture on Tuberculosis—The *Monthly Bulletin* of the New York State Department of Health announces that an outline lecture on tuberculosis for use before lay audiences in connection with the department set of lantern slides on this subject is now available and may be obtained by writing to the Supervisor of Exhibits, State Department of Health, Albany

Civil Service Examinations—Examinations will be held July 31, to fill the following positions

Assistant medical examiner state industrial commission, salary $2 000 (separate circular)

Physician and assistant physicians state institutions, salary $1,500 to $1 800 and maintenance candidates will be rated on training experience and personal qualifications

Physician (psychiatrist) Syracuse State School for Mental Defectives salary $2 000 and maintenance, candidates must be trained psychiatrists and will be rated on training experience and personal qualifications

Information regarding these examinations or separate circulars may be obtained by addressing the State Civil Service Commission, Albany Application forms for these positions will not be sent out after July 19

Personal—Dr Clarence E Cobb, Bath, has been appointed superintendent of the Steuben County Tuberculosis Hospital to fill the vacancy caused by the resignation of Dr Elliot I Dorn, Bath who assumed the superintendency of the Chautauqua County Tuberculosis Hospital April 1——Dr Clarence W Buckmaster, Yonkers, has entered on his duties as health commissioner of Yonkers and has appointed Dr Chauncey V Umsted, Yonkers, as assistant commissioner of health ——Morris Scherago, formerly head of the department of bacteriology of the University of Kentucky, has been appointed assistant bacteriologist in the state laboratory——Dr Hermann M Biggs, state commissioner of health, has been given the honorary degree of Doctor of Science by Harvard University in recognition of his work in combatting tuberculosis——Dr Edward F Marsh, Brooklyn, consultant in venereal diseases of the state department of health has recently been appointed assistant professor of hygiene and preventive medicine in Long Island College Hospital, Brooklyn——Dr Edward S Godfrey, Albany, has been appointed acting director of the division of communicable disease

New York City

New Clinics Established—The Visiting Nurse Service of the Henry Street Settlement announces that it has established four new clinics in connection with its nursing and medical facilities Plans looking to the establishmet of a diagnostic clinic are under way

Acquitted of Violation of Harrison Act—Dr Christian F J Laase has been acquitted in the United States district court on all of twenty-seven counts of an indictment returned against him a year ago alleging violation of the Harrison drug law in prescribing for addicts

Medical Education Association—At the meeting of the directors of the New York Association for Medical Education held in New York, June 21, the following officers were elected Dr Haven Emerson, president, Drs George David Stewart and Glentworth R Butler, Brooklyn, vice presidents, Dr Otto V Huffman, Brooklyn, secretary, and Dr Arthur F Chace, treasurer

Ask Leniency for Physician Convicted of Manslaughter—The conviction of Dr Julius Hammer of the Bronx for manslaughter in the first degree for having performed a curettage on a woman, which resulted in her death has called forth protests from Bronx physicians A petition signed by 400 physicians and surgeons has been presented to the Bronx County court asking for clemency for Dr Hammer This action is said to be a forerunner of a movement to appeal to the legislature to amend the penal law so as to make it possible for a physician to perform an operation of this kind to protect the life or health of a patient without fear of spending twenty years in prison Physicians state that in the present case the operation performed by Dr Hammer was justifiable and object to having "a jury of laymen pass judgment on the acts of reputable doctors"

Antirat Campaign and Other Precautions Against Plague—Owing to the danger of the spread of bubonic plague through infected rats, regulations to prevent the escape of rats from vessels docking in this port were adopted some time ago and recently special efforts have been made to apply them The sanitary bureau of the department is conducting conferences with ship owners, pier lessees, civic organizations, warehouse men and professional rat exterminators relative to ways and means to destroy rats and prevent any from landing from vessels A circular has been printed for general distribution urging cooperation on the part of every citizen in the effort to destroy rats and giving definite instructions as to how they may be caught and disposed of All ships coming to port are being carefully inspected and when there is suspicion that passengers may have been exposed in Europe they are taken to Hoffman Island for observation

PENNSYLVANIA

Hospital Building Begun—Work of construction has been started for the Emergency Hospital at Ellwood City

New Medical Organization—Physicians of Beechview, West Liberty, Brookline, Dormont and Mount Lebanon met in Dormont, April 22, and organized the South Hill Medical Association with Dr Chauncey L Palmer, Mount Lebanon, president, and Dr John L Steffy, Brookline secretary This will eventually become a branch of the Allegheny County Medical Society

Personal—Dr Clair B Kirk, Mill Hall, has been made chief of the tuberculosis dispensary at Lock Haven——Drs Edwin D Schnabel Bethlehem, and Thomas J Butler, South Bethlehem, are president and secretary, respectively, of the Physicians' Club of Bethlehem, recently organized——Dr John F Norris, for several years superintendent of the Somerset Home and Hospital, has resigned——Dr John B Critchfield, Lock Haven, has been appointed state medical supervisor of the state department of health, succeeding Dr John Herbert Waite, Flemington, resigned

Chester to Get Hospital—Another hospital to be known as the Robert H Crozer Hospital will be erected on the grounds of the Chester Hospital and will be deeded to that institution for ninety-nine years The agreement reached ended a long series of conferences between the executors of the Crozer will and the Chester Hospital managers regarding the bequest of $200,000 made by Crozer in his will several years ago for the erection of a hospital in Upland or Chester Since his death the amount has increased to $240 000 and the executors declared their intention of making available the fund for the immediate erection of a hospital

Philadelphia

More City Nurses Needed—A shortage of nurses to care for the city's insane has led the director of public health and charities to ask the city's civil service commission to waive citizenship and residence requirements in order to obtain the services of Canadian nurses

Blockley Interns Appointed—The following men have been appointed to the resident staff of the Philadelphia General Hospital Drs Furman Angel, John S Floyd, Charles A Heiken, Alfred B Nesler Robert L Crogan, Duma C Arnold, Joseph A Kervin, Frederick W Mulsow, Russell O Lyday and Adam R Blakey

Personal—Dr Charles H Frazier has accepted a commission in the Medical Reserve Corps, U S Army to attend the Interallied Surgical Conference to be held in Paris, July 18 to 23 He will make a report on the activities of the Neurosurgical Department of the Surgeon-General's Office during the period of reconstruction

Health Survey—The department of public welfare according to an announcement made by its chief physician, Dr Blair Spencer, will make a health survey of all girls and boys who go to the health centers of the city Two physicians will be appointed to hold a clinic at ten recreation centers the object being to discover any incipient illness among children and to guide them in treatment and exercises most beneficial to them

Plans for Special School—Plans have been completed by the University of Pennsylvania for the establishment of a special school of advanced training in medicine and sur-

gery to be opened in the coming autumn which will accommodate not only the graduate student who wishes to pursue his studies further, but also the trained surgeon and physician who wishes to extend his training Two hundred physicians and surgeons will comprise the staff of the new school, which will open, October 4

Bill to Regulate Drives and Campaigns—In the twenty months that have elapsed since the armistice was signed the people of Philadelphia have contributed $20 000,000 to "drives" of all kinds according to figures compiled in connection with the introduction in the city council June 29, of an ordinance to regulate the solicitation of funds for charitable purposes This bill will require organizations conducting drives for funds to file with the department of public welfare complete information in regard to the proposed use of the money collected it will require solicitors to apply for a license and pay a fee and it will empower the director of public welfare to investigate individuals and organizations filing applications

CANADA

Personal—Dr Marchant B Whyte Toronto director of medical service in the department of public health has resigned, to take effect September 1

Vital Statistics for Quebec—According to figures just issued the province of Quebec with a total population of 2,500,000 had 77,915 births in 1919 as against 82 521 in 1918 and 80 361 in 1914 The marriages reached a record number—21,997—there being only 12 031 in 1918 In 1919 the number of deaths amounted to 40 917, which is about equal to 52 per cent of the births

Federal Health Department—Owing to the retirement of Hon Newton Wesley Rowell from the ministry of health, doubt is expressed as to the future of the department There is every likelihood with the advent of a new ministry for the dominion that some of the departments will be consolidated and it is feared by high medical officials that the department of health may be merged in some other department

GENERAL

Gold Medal Awarded to Dr Souchon—The Committee on Awards at the New Orleans Session awarded the Gold Medal of the Scientific Exhibit to Dr Edmond Souchon of New Orleans for his exhibit of anatomic dissections In acknowledging the receipt, Dr Souchon writes

> The beautiful gold medal came this morning I received it with great joy as the crowning glory of my declining years In a few months I shall be 80
>
> This work is my Song of the Swan as I will not likely be able to do any more of it My endurance is fast ebbing away
>
> With kindest regards EDMOND SOUCHON M D

District Society Meeting—The annual meeting of the Iowa and Illinois Central District Medical Society was held in Davenport, July 8 Dr Gordon F Harkness Davenport, Iowa, was elected president, Dr John W Seids Moline, Ill, vice president, Dr William D Chapman Silvis, Ill secretary, and Dr William D Snively, Rock Island, Ill, treasurer

Meetings to Come—The annual meeting of the Lake Keuka Medical and Surgical Association will be held at nished by Florence Swift Wright, chairman of the section, 156 Fifth Avenue, New York

Catholic Hospital Association.—The annual meeting of the Catholic Hospital Association was held at St Paul June 22-24 Many of the Catholic hospitals were represented by groups of sisters There were also a number of physicians in attendance Special interest was shown in the shortage of nurses and a committee was appointed to suggest ways and means by which more student nurses could be recruited The association is now publishing a monthly journal entitled *Hospital Progress* and reports indicate an increased membership in the association both by institutions and individuals The election of officers resulted in the renaming of Rev C B Moulinier, as president, and Charles F McGrath, as secretary

Yellow Fever Investigations in Central America to Be Continued—In a report on the work of the Rockefeller Institute for Medical Research during 1919, Dr George E Vincent comments on the work in connection with the origin and treatment of yellow fever No cases of yellow fever have appeared in Guayaquil since June 1 1919 while from 1912 to 1918 the city averaged 259 cases annually, and there were 460 cases in 1918 The report announces that vigilance will not be relaxed for a year at least The commissions created in Central American countries to regulate control measures will be continued through the year. Dr Hideyo Noguchi, New York, will test the results at Guayaquil by further investigations at other places

The Child Welfare Special—The Child Welfare Special is a large government truck that is being used as a movable child welfare station for the purpose of carrying to remote regions the principles of child hygiene It was built especially for this purpose and follows in a general way the construction and equipment of the traveling dispensaries used in a number of the large cities of the country The truck has been in operation since July 1919 and in the meantime it has inspired welfare organizations in several communities to duplicate and augment the efforts of the government in furthering child hygiene The Children's Bureau of the U S Department of Labor has just issued an illustrated pamphlet outlining the purposes and giving a detailed account of the workings of the Child Welfare Special and it is ready to lend all possible assistance to related endeavors

Scientific Research—Under the auspices of the federal government thirty-five scientific researches are being conducted simultaneously in the leading laboratories of the United States for the discovery of more effective measures in the treatment and prevention of venereal disease These include researches at the State University of Iowa College of Medicine, on a selective medium for the isolation and cultivation of the gonococcus, at Northwestern Univer[illegible] Department of Chemistry a synthesis of new organic mercury compounds for use in the treatment of syphilis of the central nervous system, at Washington Univer[illegible] School, a study of hereditary and congenital [illegible] particular reference to the progre[illegible] of the disea[illegible] individual and the effect of treatment at [illegible] of Harvard University a continuation of the [illegible] toxicity of arsphenamin and analogous [illegible] methods of manufacturing a[illegible] at Columbia University College of P[illegible] Department of Bacteriology New [illegible]

and 48 per thousand, respectively In Saginaw, Mich, and Brockton, Mass, where the proportion of foreign-born, illiterate and gainfully employed mothers was comparatively low, and incomes were more nearly adequate, infant mortality rates from gastro-intestinal diseases were only 8 and 12 per thousand, respectively

LATIN AMERICA

Plague in Mexico—It is reported from Mexico that one death from bubonic plague and two new cases were reported at Vera Cruz on July 12 It is also stated that there have occurred several cases of yellow fever

Personal—Dr E R Coni, the pioneer in public hygiene in Argentina, has been elected honorary member of the Havana Academy of Medical and Physical Sciences——Dr Juan Santos Fernandez of Havana has been elected corresponding member of the S Paulo Medical Society, Brazil——Dr F M Fernandez of Havana has been elected corresponding member of the Sociedad oftalmologica mexicana and member of the Sociedad academica de Historia internacional The two latter are director and editor of the *Cronica medico-quirurgica de la Habana*

FOREIGN

Race Biology Institute—It is announced that the Swedish parliament has appropriated 50,000 crowns for the yearly maintenance of the Rasbiologisk Institut at Upsala, of which Prof H Lindborg is in charge

Roentgen-Ray Injuries—The cable reports that the radiologist, Dr C Infroit, of Paris, had to have his remaining arm amputated on account of roentgen-ray injuries This is the twenty-fourth operation he has had to undergo since 1898

Brazilian Hospital Transferred to France—The hospital installed by Brazilians in Vaugirard, France, at a cost of $2,000,000 has been offered by the government of Brazil to France and has been accepted by the Paris Faculty of Medicine

Marriage and Disease—The new Danish marriage law is up for its third reading in the Folketing (Lower House) after which it will go to the Landsting (Upper House) for consideration The committee having the draft in charge is unanimous in approving the following provisions

1 If the person who wishes to contract a marriage does not suffer and has never suffered from venereal disease he shall give a written declaration on his honor to that effect

2 In the opposite case he must either put in a doctor's certificate made within the previous fortnight that the danger of infection or its transmission to the children is most improbable or

3 If such a declaration cannot be made he must prove that the other party to the marriage has been informed as to the disease and that both parties have had oral instruction from a doctor as to the dangers consequent thereon

Deaths in Other Countries

Dr de Pezzer, a well known urologist of Paris——Dr Susano Almado of Montevideo, a leader in the fight against tuberculosis, aged 50——Dr J F Fuste of Placetas, Cuba ——Dr Cayetano Vilalta of Manbanillo, Cuba, and Dr A Lobato of Havana, both members of the national legislature

CORRECTIONS

Dose of Arsphenamin—In the article by Dr Oliver S Ormsby, Chicago, THE JOURNAL, July 3, page 4, second column, it is stated that frequently repeated small doses, that is from 0 1 to 0 5 gm, are inefficient The figures should be 0 1 to 0 15 gm

Society Election—In the May 29 issue of THE JOURNAL it was announced that Dr Warren G Patton, Cape Girardeau, had been elected president of the Southeastern Medical Association The new president of the association is Dr William G Patton of Cape Girardeau

Treatment of Anthrax—In an article on "Anthrax," THE JOURNAL, May 22 page 1441, Dr Albert J Scholl, Jr, Los Angeles, states that Regan reports a successful case and suggests phenol injections at the site of the wound The statement is an error We are informed that Regan used anthrax serum locally

Interstitial, Not Epithelial—In THE JOURNAL, June 19, page 1748, the abstracter quotes Ishibasi *Mitteilungen a d med Fak d kais Univ*, Tokyo, to the effect that he finds no relation between the total amount of the interstitial cells and the secondary sexual characters, but erroneously uses the words 'epithelial cells" In the abstract, the word 'interstitial' should be substituted for 'epithelial'

Government Services

Colonel McCoy Honored

John C McCoy, Lieut-Col, M C, U S Army, Paterson, N J, was decorated with the Distinguished Service Cross at Governor's Island, April 30 Colonel McCoy was cited for exceptional bravery under fire at a hospital at Joug-sur-Nurin and at Chateau-Thierry, where he commanded Red Cross hospitals

Funeral Honors to General Gorgas

Unusual honors were paid July 9, at the funeral ceremonies of Major-General Gorgas in St Paul's Cathedral King George V was represented by Sir Thomas Herbert John Chapman Goodwin K C B, C M G, D S O, and a salute of thirteen guns was fired as the procession started from Queen Alexandra Military Hospital The procession was led by the Coldstream Guard band followed by detachments from the Coldstream Guards, the Life Guards and other military organizations Representatives from all the allied powers and from scientific organizations of England and the continent were honorary pallbearers

HONORABLE DISCHARGES, MEDICAL CORPS, U S ARMY

NOTE.—In the following list L signifies lieutenant, C, captain, M, major, L C, lieutenant colonel, and Col, colonel

ARKANSAS
Wesson—Slaughter J W (L)

COLORADO
Boulder—Salberg J B (L)
Denver—McGugan W A (C)
Preston M F (M)
Walker A G (C)
Frederick—Leyda J H (C)

DISTRICT OF COLUMBIA
Washington—Cox S G (M)
Dickerson D G (L)
High D L (M)

GEORGIA
Milledgeville—Saye E B (C)

ILLINOIS
Anna—Rendleman G F (L)
Chicago—Moir C L (M)
Monmouth—McKinley R W (L)
Towanda—May O F (L)

INDIANA
Attica—Casey E B M (L)
Evansville—Cox J B (C)

KANSAS
Osawatomie—Frazer, B F (L)
Seneca—Rudbeck J (L)

MARYLAND
Baltimore—Darby, W A (L)
Herring A P (M)
Fallston—Yellott R E (C)

MASSACHUSETTS
Boston—Stack J J (C)
Newton—Maskell L J (C)

MICHIGAN
Detroit—Bulson G A (C)
Hurt—Day C (C)
Sault Ste Marie—Lemon A E (M)

MISSISSIPPI
Schlater—Holland M L (L)

MISSOURI
Kan as City—McCarty G D (L)

MONTANA
Scobey—Tucker C C (L)

NEBRASKA
Broken Bow—Talbot W E (M)

NEW HAMPSHIRE
Haverhill—Squires W H (C)

NEW JERSEY
Atlantic City — Clement E B (C)

NEW MEXICO
Lordsburg—James S H (L)
Pinos Altos—Robinson L B (C)

NEW YORK
Beicon—Du Bois L C (C)
Dunkirk—Meister H J (C)
Glen Cove—McBirney R S (L)
New York—Herrick W P (C)
Hunter J R (C)
Price J (L)
Rockville Centre—Martin A C (M)

NORTH CAROLINA
Laurel Hill—Willcox J W (L)
Oak City—House W H (L)

OHIO
Jamestown—Troute F R (L)

OKLAHOMA
Berwyn—Webb J W (L)
Tulsa—Gwin H B (C)

OREGON
North Bend—Bartle I B (M)
Portland—Matson R C (M)

PENNSYLVANIA
Glen Rock—Lutz J F (M)
Philadelphia — Baier G F Jr (L)
Schartz F W (M)
Pittsburgh—Heilman H C (C)

SOUTH CAROLINA
Charleston—Wynne W R (L)

TEXAS
Belton—Denman J A (C)
Dallas—Loving R S (C)
Delvalle—Morris F T (L)

UTAH
Murray—Knott A D (C)
Ogden—Forbes H B (C)

VERMONT
Montpelier—Tindall W J (M)

VIRGINIA
Snowville—Summers F T (L)

WEST VIRGINIA
South Charleston—Henson A N (L)

WISCONSIN
South Kaukauna—Hoyt B F (C)

MEDICAL OFFICERS, U S NAVY, RELIEVED FROM ACTIVE DUTY

DISTRICT OF COLUMBIA
Washington—Calcote R J

NEW YORK
New York—Eisler S
Walsh W J

OREGON
Seaside—Briscoe L E

PENNSYLVANIA
Philadelphia—Carey H M

VIRGINIA
Richmond—O Brien W A

Foreign Letters

PARIS

(From Our Regular Correspondent)

JUNE 24, 1920

Rapid Test for Butter Fat

Dr Icard of Marseilles, speaking before the Societe de pathologie comparee, recently called attention to a practical method for examining milk, especially applicable to the milk of wetnurses A drop of milk is placed on a piece of paper, which is placed across the two branches of a hair-pin resting on an iron spoon This is then held in an alcohol or gas flame or over the globe of an oil-lamp, for from three to five minutes or until the drop of milk has dried and has assumed a dark caramel tint, almost black At this moment it will be seen that a dark caramel spot is surrounded by a bullous halo, which can be clearly distinguished The diameter of this halo is proportional to the butter fat content of the milk A good cow's milk will give a halo nearly three times that obtained with a drop of ordinary milk

The procedure will be especially valuable in examining wetnurses It will give very reliable information about the nutritive value of the milk and it will make it possible to determine the variations in fat content during the nursing period and especially under certain physiologic and pathologic conditions (menstruation, pregnancy and various diseases) The halo obtained with a drop of good human milk is always smaller than that with a drop of good cows milk The same procedure may also be applied to the examination of cheese, but the halo is much larger, owing to the greater fat content

The Physicians of Alsace

Alsace is still under a transition government, which has occasioned considerable difficulties, especially emphasized in regard to the status of Alsatian physicians Most of these are graduates of the German faculty of Strasbourg, and have not up to the present time been authorized to practice elsewhere than in Alsace-Lorraine During the World War, many of them gave their services to France in Red Cross hospitals and by attending the civil population

At the armistice however, it was determined that they could not practice medicine in France, and they therefore returned to Alsace At that time a demand was made that the question of recognizing the Strasbourg diploma as equivalent to the French diploma be settled as soon as possible Up to date nothing has been done about it

The Association de la presse medicale française at its last meeting displayed considerable agitation over this state of affairs, and adopted a motion requesting early settlement of the question by Parliament The resolution was sent to the medical members of Parliament and these will take prompt steps to improve the status of their Alsatian confreres

The Public Health Budget

Dr Roux, director of the Pasteur Institute of Paris at a recent meeting of the Academie de medecine, remarked on the fact that the budget of the Ministere de l'hygiene, assistance et prevoyance sociale carries 105 000 000 francs for relief and only 2,730 000 for hygiene This disproportionate appropriation for public health work shows that the care of the sick has until now outweighed the prevention of disease, a policy which should not be continued To care for the sick is good but to prevent disease is still better If it is hoped to reduce, some day the expenditures for charity it is necessary to start now by increasing the appropriation for public health work The Academy adopted a resolution requesting an increased budget for hygiene and a reorganization of the service along lines which will best serve the public good

Epilepsy Prize Competition

On several occasions, attention has been called to an important international competition for a prize of 100 000 francs offered by an anonymous donor to that investigator who should effectively disclose by clinical study, and if necessary by experiment the pathogenesis and treatment of nervous diseases especially epilepsy The competition lasted during 1913-1919, but the capital prize was not awarded However three papers were retained and were deemed worthy of reward one by Dr Dujardin Brussels, another by Drs Bouche and Hustin, Brussels and a third by Drs Dide and Guiraud, Toulouse

Committee on Day Nurseries

At the time when the first hot spell threatened the recrudescence of infant mortality, M Raux prefect of police called a meeting of a number of presidents of Paris day nurseries in order to coordinate the efforts of the various agencies interested in the protection of infant life In Paris, there are more than 160 nurseries established through private charity, not counting those attached to factories or the milk stations ("gouttes de lait") which render splendid services to infants in the populous centers In each of these nurseries more than twenty infants are cared for and fed

The prefect of police conceived the idea that it would serve a useful purpose to organize the presidents of these agencies into a Comite consultatif des creches This new committee will occupy itself with the development of breast feeding, it will study the difficulties and advantages of artificial feeding and will make recommendations regarding feeding bottles cradles and other articles employed in the care of children Those nurseries which play a passive role will have a new field of activity in the teaching of hygiene directly to mothers Finally when children are found in a bad state of health because of insanitary housing conditions the nurseries can refer these to the attention of the prefect of police who will be able to suggest correction of the evil by the property owner

LONDON

(From Our Regular Correspondent)

June 26 1920

The Revolution in Medical Service

The revolution in the medical service of the country described in a previous letter was the subject of an address by Lord Dawson of Penn to a branch of the British Medical Association It may be remembered that he is chairman of the Consultative Medical Council appointed to advise the ministry of health, which brought forward the scheme He pointed out that the health of the citizen was now seen to be of supreme importance and it was agreed that organized measures must be taken for securing it A series of whole-time services had been set up one by one The school service for example had become almost a detached service with a certain number of physicians earning their living entirely as school medical officers More recently there was set up a tuberculosis service then a venereal service and lastly a maternity service The second evident fact was that physicians today were not in a position to do or give the best for their patients along purely individual lines In his hospital days a man had every facility for following up his cases in the various departments he could look at the roentgen ray image he could see the testing of the secretions and could go into the operating theater and the postmortem But on going into practice he dropped suddenly [illegible] limited opportunities of an office in a private [illegible] he went to the home of the people the [illegible] were often such that he could not do [illegible] of medicine right through the [illegible]

organization and provision The insurance act was one endeavor to bring medical treatment within the reach of the people more completely than before, but if the best means for the treatment of the community were to be made available, the range of benefit must not be restricted to insured persons The state could not be asked to make those means available only for one section of the community The reference to the Consultative Council was therefore to suggest ways whereby the medical services of the country could be so systematized as to provide what should be made reasonably available for all members of the community The recommendations were designed to secure (1) the provision of buildings and equipment, (2) services correlated and made available for all, (3) opportunity for physicians to do their best work and further their knowledge, (4) coordination of preventive and curative medicine and (5) freedom of action for physician and patient It was difficult to combine all these ideals If the point of view of the administrator alone were considered, recourse would be to a whole-time service But that was felt not to be the best thing in the interest of the health of the community The correlation of preventive and curative medicine was most important, and at present the physician was not identified closely enough with prevention and with the maintenance of communal health He had yet to be brought into contact with the preventive services The higher posts in such services must necessarily be in the hands of specialists, but the physician, nevertheless, must somehow be identified with preventive work With the advance of knowledge, the line of demarcation between prevention and cure became increasingly blurred A further principle on which the council had acted was that the work of a district should as far as possible be performed by the physicians of that district, who should be paid on a part-time basis This in itself would bring preventive medicine more under the ken of the general physician Then, it was realized also that the physicians must have opportunities of following up cases and investigating disease from different standpoints The work of medicine was becoming less the work of an individual, and more the work of a team An increase of institutional provision was therefore indicated What was suggested was new, there was no experience from any other country to guide them, indeed other countries were watching the experiment with a view to imitating it The term 'health center" was employed because something bigger and more embracing was desired than the term 'hospital" The center might be defined as an organization to bring together the curative and preventive services of a given district In a typical instance it might contain fifty beds, with certain clinical accommodation where consultations might take place and patients be seen other than those in the beds, also a roentgenographic room, a laboratory and other departments, and a common room where physicians could hold meetings The essential thing about the primary health center was that it should be staffed by the physicians of the district, and that when a patient left his home and went into the clinic he would be followed there by his own physician The primary health centers in a given area would be connected with a secondary center, which instead of being staffed by physicians would be staffed by consultants or by physicians acting in a consultative capacity Then to complete this ideal arrangement the secondary centers would be linked with a teaching hospital which would be scheduled as a national institution with a 'zone of influence" attaching to it

The Medical Curriculum

The General Council of Medical Education is discussing the reform of the medical curriculum Sir George Newman, principal medical officer of the ministry of health, whose official memorandum on medical education in England has attracted much attention, put in a plea for the importance of the preliminary science subjects in relation to clinical medicine and surgeory He thought it desirable to strengthen these science subjects rather than weaken them Chemistry, physics and biology were continually becoming more closely allied to clinical work He laid down six points for consideration in connection with that broad and generous revision—he would not say revolution—of the curriculum which the time was more than ripe for the council to discuss His six points were 1 The curriculum ought to be lightened at both ends We were not giving our students time to think or digest. True culture or learning was never forthcoming on the principle of the general scrimmage 2 An endeavor should be made to coordinate the preliminary scientific and intermediate subjects with each other and with the clinical, and to make the preliminary scientific subjects much more applied 3 The reorganization of clinical teaching must be considered In America and Germany he had seen no clinical teaching to compare with the best in this country, but our clinical teaching wanted reorganization so that the clinical teacher was in a position to give his best, and not a mere residuum 4 He would like to see the provision of ampler education in four or five particular subjects, namely, venereal diseases, tuberculosis, maternity and infant welfare, orthopedics and mental diseases 5 There must be some kind of postgraduate equipment, first for dealing with specialism, and secondly, for insuring the continued education of the student 6 He would put in a plea for a reform of the examination system The examination system must follow the training, not lead to it It must include the preparation of the student, not exclude it It must represent not a hazard but a certainty It must be an instrument by which the center of gravity was thrown upon the curriculum rather than upon the examination room itself This would alter the whole outlook for the student He would see that his education was not a scrimmage for an uncertain goal, but a course of study for a final destiny

BELGIUM

(From Our Regular Correspondent)

June 16, 1920

Rationing of Belgium During the War

M Demoor this time in collaboration with M Slosse, has published another study on the food conditions in Belgium during the war, and the disastrous consequences to the population The conclusions of this contribution are very interesting from a physiologic and sociologic point of view They are based on the results of an impartial scientific investigation by one with a strict professional conscience He brings out the fact that the average daily ration for a man was equivalent to from 1,400 to 1,500 calories with 35 gm of protein (largely vegetable) This diet, decidedly below requirements caused serious impairment of the health, as observed in 1916 by Professor Lucas, a representative of the American Commission to Belgium, in a report to Mr Herbert Hoover The work is of special social and political import and deserves attentive perusal, all the more so as certain data are apparently in direct contradiction to the findings of Professor Starling during his investigation in Germany A fairly complete version of the official resume published by the Royal Academy may therefore be of some interest

The Comite National, which managed the food rationing, understood from the beginning of hostilities that after giving all of Belgium the largest ration which could possibly be distributed (it is now seen that it was insufficient), it must seek especially to protect and sustain the children

It undertook the feeding of all infants from 0 to 1 year, and granted a supplementary ration to pregnant women and

to nursing mothers Later it provided extra meals for debilitated children In February, 1918 it distributed 11,343,000 varied meals of from 600 to 825 calories, to children between 3 and 16 years From 1916 to the end of the war, school lunches consisting of 70 gm of bread, 5 gm of lard, and milk (when available) were provided for 1,174,000 children This then constituted the dietary of the Belgians during the war, an insufficient regimen in fact, which could only lead to much misery Some selected facts among those recounted by the various authors will justify this assertion

INFANTS UNDER ONE YEAR

Thanks to the special measures of infant care, enteritis practically disappeared and infant mortality fell off in 1915 and 1916 In the following two years, the figures again increased without, however attaining the proportions of the period before the war But the decreased mortality does not prove that the children were more robust than normally or that the general diet was good As a matter of fact the weight of new-born infants averaged only 2,500 gm at birth (Antwerp and Brussels) as compared with the prewar average of 3,000 gm, and there was an increase of mortality from congenital debility Their physical development (height and weight) was inadequate On the whole while the lives of living children may have been protected, the unborn children came into life with marked unfavorable heredity

CHILDREN FROM ONE TO SIX YEARS

The incidence of rickets increased markedly and attained proportions hitherto unknown in Belgium

CHILDREN FROM SIX TO FOURTEEN YEARS

In this age group development was greatly retarded and the average weight and height for the various ages at the end of the war was below normal by a figure corresponding to the growth of one full year In the course of the four years of war then, the average child lost one year in physical development Dr Dubois figures show that the same was true in Liege

CHILDREN IN ORPHAN ASYLUMS

The orphans were given a special examination in May, 1918 In two orphanages at Herenthals for example, the dietary yielded a total of 1341 calories (30 gm of protein and 17 gm of fat) in one and 1871 calories (58 gm of protein) in the other Now in the first orphanage two thirds of the children were below the normal height and weight, and in the second one half of the inmates were subnormal So then, in spite of all the special care which they received these two groups comprised three fourths or one half of children with serious physical impairment Before the war, in a communal school of the poorest quarter of Brussels, only one fourth of the children showed as much impairment.

ADULTS

The mortality rate of adults increased during the war slightly in 1916 but more in 1917 and 1918 Influenza and tuberculosis undoubtedly made great inroads but deaths from renal and cardiac diseases were also much more numerous Immunity processes were lowered and the body's resistance against disease was enfeebled Undoubedly adults were greatly reduced in robusticity the average loss in weight for men in Brussels and Liege being 10 kilograms In 1916 among 600 inmates of an agricultural colon for the insane in Gheel an average loss in weight of 4.2 kg was noted. These facts are brought out by Drs Denoor and Slosse who discussed at the same time a British parliamentary report by Prof E. H Starling on his investigations in Germany after the armistice. Professor Starling claimed that the average food allowance per man in Germany was 1,500 calories, plus 200 calories (from cultivated legumes) plus 300 calories extra for workingmen (45 gm of protein, and from 15 to 20 gm of fat) He contended that this ration was deficient and he showed that the general health was impaired and that both children and adults were suffering The London physiologist compared the present German ration and its consequences with that which he believes to have been the Belgian ration during the war According to him the program of the American Commission during the war provided a ration averaging 2842 calories per man (2,274 calories per inhabitant) and that the Belgians were not much impaired and cases of undernutrition were rare

The Belgian professors are asking their English colleague why he did not get direct information on the real facts about the rationing of Belgium Of what significance is a program? In times of war, ship arrivals are irregular and agricultural and other products are constantly commandeered by the enemy, therefore the food actually distributed and not that which it was planned to provide should be considered As a matter of fact the Belgian subsisted on from 1,400 to 1500 calories during the war

If Professor Starling had made the same inquiries in Belgium that he made in Germany he would have found that tuberculosis and debility have increased considerably and that all the misery described by Professor Lucas, in 1916 became accentuated in 1917 and 1918 He would have encountered the populace overwhelmed by ruthless invaders preserving their moral strength in opposing the enemy though physically they were much enfeebled and tottering Such an inquiry would have prevented inclusion of the erroneous conclusions regarding Belgium

MEXICO CITY

(From Our Regular Correspondent)

July 4 1920

Decrease of Plague Epidemic

According to the official data from June 18 to June 25 there were at Vera Cruz only seven new cases and three deaths of bubonic plague making a total of forty-six cases and twenty-nine deaths from the beginning of the epidemic From June 25 to July 2 there have been no new cases, and in view of the energetic measures being carried out, it is to be hoped that no more cases will occur However the epizootic has not subsided since the plague bacillus has been found in two of the trapped rats As a result the deratization measures are being pushed and the department of public health in order to prevent new invasions is going to establish at Vera Cruz a permanent deratization service Aside from the original focus at Vera Cruz no others have been discovered and a general campaign against rodents in this capital and other places has been carried out only as a precautionary measure

Mexican Medical Association

Our association has established its headquarters at No 18 Avenida Juarez. In order to celebrate the opening as well as the first anniversary of its foundation the association will give a concert for physicians and their families There has already been published the first number of the *Bulletin* of the association which so far is only an organ for propaganda and information As it is intended that the journal of the association will keep abreast of similar foreign publications it has been decided to postpone its appearance until the necessary elements are available.

In Honor of Dr Liceaga

The National University the Mexican Medical Association the Academy of Medicine and other scientific bodies recently joined in funeral services in honor of Dr Liceaga who died in the early part

memory as a scientific and public official we try to keep alive as a model for future generations On its part the Department of Public Health has rendered homage to Dr Liceaga, placing his portrait in its assembly hall On this occasion the chief of this department, Dr Malda, a pupil and admirer of Dr Liceaga, spoke on the virtues that distinguished the latter

Personal

Dr Enrique Gonzalez Martinez, a well known writer and former undersecretary of public instruction, has been appointed minister of Mexico to Chile, and will leave very soon for Santiago ——Nothing is known about the whereabouts of Dr Alfonso Cabrera, former governor of the state of Puebla, who had to abandon his capital during the last revolution Dr Cabrera always took an active interest in everything pertaining to the profession He contributed greatly to the success of the Fifth National Medical Congress, founded and supported for two years the *Revista Medica,* had a law adopted regulating the practice of liberal professions, and during his term of office some "healers" were sent to jail for practicing medicine illegally, which is an unusual occurrence in this country ——Dr Alfredo Caturegli has been appointed Mexican financial agent in New York ——Dr A Lara N has been designated as head of the School of Medicine of the State of Yucatan ——It is expected that in the near future there will return to this country Dr F Vasquez Gomez, now of San Antonio, Texas, who was a former candidate for the vice presidency of Mexico, and Dr Fernando Zarraga, former dean of the School of Medicine, now of Los Angeles Both had to leave several years ago on account of politics

Marriages

FRANK IGNATIUS STUART, Independence, Mo, to Miss Minnie Ruth McLaughlin of Monticello, Iowa, June 29

ABRAHAM LEBENDIG, Rochester, N Y, to Miss Mamie E Spoont of Shenandoah, Pa, at Rochester, June 29

OLIVER H KELSALL to Miss Dorothy May Dietzmann, both of Louisville, Ky, at New Albany, Ind, June 22

WILEY WARREN JOHNSTON, Winston-Salem, N C, to Miss Bess Swearnghan of Charlotte, N C, June 10

WILLIAM OTTERBEIN ROOP, Atlantic City, N J, to Miss Emma L Taylor of Jackson, N C, June 26

SYLVESTER C E ALLEN Waterloo, Wis, to Miss Mercy Rockwood of Oshkosh Wis, June 19

FREDERIC GEORGE MAURER Lima, Ohio, to Miss Odilia Ann Neumeyer of Toledo Ohio, June 19

STEPHEN PASCHAL KENYON, Dawson, Ga, to Miss Lucille Hooper of Atlanta, Ga June 16

RAY HOSKIN RULISON to Miss Mildred Fowler Gignoux, both of Monroe, N Y June 28

HENRY KAPLOVICH, Haverhill, Mass, to Miss Lillian Cohen of Somerville Mass, June 1

GEORGE B RANDALL, Buhl, Idaho to Miss Mathilda Bohr of Pocatello Idaho June 10

BENJAMIN AUGUSTUS to Miss Anna Beatrice Davidson, both of Chicago recently

ROY ROBERT HALEY to Miss Mary Katherine Erwin, both of Brookfield Mo June 28

EU YOUNG KAU, New York City, to Miss Mabel F J Tyau of Philadelphia, June 16

JAMES LOUIS LOCASCIO to Miss Olga Marie Elliott, both of New Orleans, June 23

SOLOMON BILOON to Miss Fannie R Levin, both of New York City, June 20

BENJAMIN KADISH to Miss M Saplitzsky, both of Chicago, June 27

JACOB RUCHMAN to Miss Edith I Max both of Brooklyn, June 27

Deaths

Joseph Oakland Hirschfelder ⊕ San Francisco, University of Leipzig, Germany, 1876, aged 65, died, July 4 After studying for two years at the University of California and a year at the Medical College of the Pacific, he completed his medical studies at Wurzburg, Berlin and Leipzig On his return to America in 1877, he was made professor of materia medica and clinical medicine in the Medical College of the Pacific, San Francisco, and continued as professor of clinical medicine throughout the life of Cooper Medical College from 1882 until its absorption by Leland Stanford, Jr, University, when he become emeritus professor Working with General Sternberg, he was one of the first in this country to confirm Koch's findings of the tubercle bacillus In his latter years he devoted himself chiefly to experimental medicine His work was all done in his own laboratory at his own expense, with tireless devotion and thoroughness His methods were largely original and his experimental resourcefulness excellent He was a keen diagnostician and warm-hearted physician, and held for many years a leading position as a practitioner and consultant

Adolph Alt ⊕ St Louis, University of Heidelberg, Germany, 1875, aged 69, a member of the American Academy of Ophthalmology and Oto-Laryngology and American Ophthalmological Society, professor of ophthalmology in Beaumont Hospital Medical College, St Louis University Medical School, and Washington University, and professor emeritus in the latter institution since 1917, a veteran of the Franco-Prussian War, oculist and aurist to the St Louis Mullanphy Hospital, and consulting oculist to several hospitals of the city, died, June 28, from heart disease

John Henry Curtis, New Britain, Conn, University of the City of New York, 1886, aged 56, for twelve years professor of therapeutics in the College of Physicians and Surgeons, Chicago, for several years an official of the Chicago Health Department, who went to New Britain in February as superintendent of the local department of health, died, June 26, from embolism

William Hamilton Lambert, Moosejaw, Sask, University of Toronto Ont, 1893, aged 51, major, R A M C, during the World War, with service in Asia Minor and Egypt, and since the war president of the examining board at Moosejaw, and consultant in diseases of the eye and ear in the Military Hospital, died, June 11, from nephritis

Charles Arthur Pauson ⊕ San Francisco, University of California, San Francisco 1907, aged 38 captain, M C, U S Army, and discharged March 26, 1919, died in Mount Zion Hospital, San Francisco June 29 from acute congestion of the brain and lung due, it is said, to a local anesthetic, injected preparatory to a tonsillectomy

Marion Tracy Davis ⊕ Atlanta, Ga, University of Maryland Baltimore 1892, aged 51, formerly a member of the staff of the Grady Hospital Atlanta, died June 26, from the effects of a gunshot wound of the head, believed to have been self-inflicted, with suicidal intent, while despondent on account of ill health

John D Sourwine ⊕ Brazil, Ind, Central College of Physicians and Surgeons, Indianapolis 1896, aged 67, local surgeon for the Big Four system, said to have been the builder of the first traction line in the United States, formerly a druggist, postmaster of Brazil in 1884, died, June 26, from heart disease

James Stratton Carpenter, Pittsville, Pa, University of Pennsylvania, Philadelphia, 1882, aged 61, local surgeon for the Pennsylvania system since 1889, surgeon of the Eighth Infantry, N G, Pa, from 1885 to 1895, president of the Schuylkill County Medical Society in 1889-1890, died, July 3

Oscar Baker Steely ⊕ Pocatello, Idaho, Jefferson Medical College, 1891, aged 58, formerly president of the Idaho State Board of Health, a member of the Association of Military Surgeons of the United States, division surgeon of the Oregon Short Line, died June 27, from angina pectoris

Delbert Joseph Miller ⊕ Alliance, Ohio, University of Michigan Ann Arbor 1888, aged 57 died at the home of his brother, near North Benton Ohio June 29, from the effects of a gunshot wound, self-inflicted, it is believed, with suicidal intent while suffering from melancholia

George W Thomas, Chester, Pa, Howard University, Washington, D C, 1908, aged 45, a colored practitioner,

⊕ Indicates Fellow of the American Medical Association

and a member of the staff of Douglas Hospital, Chester, died in Chester Hospital, June 18, from surgical shock a few hours after an operation for appendicitis

Ellsworth S Blythe, Allen, Texas, Vanderbilt University, Nashville, Tenn, 1884, aged 61, a member of the State Medical Association of Texas, died in a sanatorium in Dallas June 14, from malignant disease, for which an operation had been performed four days before

John Calvin Fulton, Bluffton, Ind (license, Indiana, years of practice, 1897), aged 75, a practitioner for more than fifty years, a member of the Indiana State Medical Association, a veteran of the Civil War, died, June 22, from carcinoma of the intestines

Robert Shelby Cowan, Girard, Ill, St Louis Medical College, 1867, aged 87, a charter member of the Macoupin County Medical Society, a surgeon of Third Missouri Volunteer Cavalry during the Civil War, for three terms mayor of Girard, died June 18

Thomas Linton Price, San Francisco, Medico-Chirurgical College of Pennsylvania, Philadelphia 1897, aged 54, was found dead in a skiff at Wingo, Calif, June 19 Death is believed to have been due to heart disease, resulting from heat exhaustion

Joseph Burton Connell, Kansas City Mo, Kansas City (Mo) Medical College, 1887 aged 64, formerly professor of skin diseases in the Medical Department of the State University of Kansas, died in a sanatorium in Jacksonville, Ill, June 18

James C Stewart, Kansas City Mo Kansas City (Mo) Homeopathic Medical College 1895, aged 69, professor of visceral anatomy in his alma mater, formerly a builder and contractor, died, June 21, from the effects of roentgen-ray burns

Davison Hughes Ray, Bingham Canyon, Utah, University of Louisville, Ky 1907, aged 39, after his graduation acting assistant surgeon in the United States Public Health Service died at his country home near Bowling Green Ky, June 27

John Edgar Hathorn, Bartley, Neb, Rush Medical College 1874, aged 75, a member of the Nebraska State Medical Association, at one time a member of the state legislature, died, May 6, as the result of an automobile accident

William Austin Tomes, Brooklyn, College of Physicians and Surgeons in the City of New York 1891, aged 55, a member of the Medical Society of the State of New York, died, June 28 from carcinoma of the liver

Robert H Milnor, Warrensville, Pa, Jefferson Medical College, 1896, aged 52 a member of the Medical Society of the State of Pennsylvania, died in Hahnemann Hospital Rochester, N Y, June 24 from nephritis

Sidney P Hollingsworth, Washington D C, National University Washington, D C 1886, who had been in the patent business in Washington for many years, died June 18, in the Emergency Hospital, Washington

Edmund Oldham, Chatsworth, Ont, Queens University, Kingston, Ont, 1881, medical officer of the Thirty-First Regiment with rank of lieutenant colonel for twenty-five years, died June 8

George Thomas Northcutt, Seligman, Mo, University of Tennessee, Nashville 1896, aged 54, a member of the Missouri State Medical Association, died, May 18, from cerebral hemorrhage

Thomas W Duvall, Lynchberg Ohio Medical College of Ohio Cincinnati 1886, aged 55, a member of the Ohio State Medical Association, died May 21, from cerebral hemorrhage

Joseph M Wells ⊕ Trenton N J, Jefferson Medical College 1878, aged 63, for many years local surgeon for the Pennsylvania system, died, June 11, from cerebral hemorrhage

James Anderson, Hamilton Ont University of Toronto, Ont, 1880, aged 61, died recently at the Mayo Clinic Rochester, Minn after an operation for carcinoma of the throat

Sebastian Cabot Hatton, Riverton Iowa, College of Physicians and Surgeons, St Joseph Mo 1882 aged 71, died in the Jennie Edmundson Hospital, Council Bluffs, Iowa, July 5

Elijah H Hesterly, Cerro Gordo Ark (license, Eclectic State Medical Board of Arkansas 1903) aged 47 was accidentally drowned, while fording Little River, June 19

George David Arnold, Cleveland, University of Pennsylvania, Philadelphia, 1871, aged 71, a member of the Ohio State Medical Association, died in Mexico June 14

Donald A Kellogg, Sacramento, Calif Bellevue Hospital Medical College, 1889 aged 54, a member of the Medical Society of the State of California, died June 23

George Louis Ahlers, Pittsburgh, University of Buffalo, 1883 aged 55 formerly police surgeon of Allegheny, Pa, died June 21, from carcinoma of the stomach

John Wesley Blades, Hornell N Y, University of the City of New York 1881 aged 74, local surgeon for the Erie Railroad, died June 28 from heart disease

William P Patterson, Beauregard Miss, license, Mississippi State Board of Health, 1882, aged 82, died in Hattiesburg Miss May 1, from senile debility

Ernest A Bleuler, South Bend Ind, Washington University St Louis 1898, aged 60, died in Epworth Hospital South Bend June 12 from heart disease

Thelesphere Chagnon, Brooklyn, Long Island College Hospital Brooklyn 1894, aged 61, also a pharmacist, died, June 22 from cerebral hemorrhage

Thomas Cope, Nazareth, Pa, Jefferson Medical College 1869, aged 72, a member of the Medical Society of the State of Pennsylvania died June 26

Robert Joseph Thompson, Versailles Ky, Kentucky School of Medicine Louisville, 1870, aged 73, died at the home of his sister in Versailles, June 22

John Horner, White Water, Kan, Eclectic Medical Institute Cincinnati, 1880, aged 87, for fifty years a resident of Butler County, died June 19

George W Higbee, Sullivan, Ind, Homeopathic Medical College of Missouri St Louis, 1870, aged 78, a veteran of the Civil War died, June 12

Ernest C Brown, Madrid Iowa, University of Michigan Homeopathic Medical School, Ann Arbor, 1893, aged 53, died May 30, from tuberculosis

Sandford Reamy, Hot Springs, Ark, University of Louisville, Ky, 1851 aged 92, died at the home of his daughter in Hot Springs June 19

Quintus Emanuel Snyder, Frenchtown, N J, Bellevue Hospital Medical College 1868, aged 78, died, May 10, from progressive paralysis

John H Neese, Tremont City, Ohio, Starling Medical College Columbus Ohio, 1892 aged 64, died, June 15, from cerebral hemorrhage

Thomas McKenzie, Parkdale, Toronto, University of Toronto 1883 aged 55, lecturer in biology in his alma mater, died, June 2

Harry Lewis Connett, Athens Ohio, Johns Hopkins University Baltimore 1909, aged 38, died March 31, from pulmonary tuberculosis

George E Meredith, Lanesville Va University of Maryland, Baltimore 1886, aged 56, died June 10, from cerebral hemorrhage

John Moore, Sussex N J, College of Physicians and Surgeons in the City of New York 1866, aged 76, died April 30

John C Cooper, Carrollton Mo, University of Pennsylvania Philadelphia 1856, aged 87 died, May 2, from renal calculus

Ivey Goodman Riddick, Raleigh N C, Bellevue Hospital Medical College 1886, died recently from carcinoma of the throat

Victor Sisung ⊕ Monroe, Mich, Detroit College of Medicine and Surgery 1895, aged 52, died, June 27, from heart disease

George J Pickenpaugh, Unionville Mo Northwestern Medical College St Joseph Mo 1885 aged 64 died, June 9

Irving S Bretz ⊕ Cleveland College of Physicians and Surgeons 1897 aged 49 died, June 25 from heart disease

Julius B Thomas, Smiths Grove Ky, University of Louisville Ky 1870 aged 79 died May 13 from uremia

William H Price, Cartersville Mo license Missouri 1883, aged 79 for half a century a practitioner died June 14

Grant Newton, Dexter Mo, Chicago Homeopathic Medical College 1894 aged 52 died June 14 from dropsy

William Iseminger, Denison Iowa (license years of practice Iowa 1887) aged 83 died June 21

Nelson Cheney, Corning N Y Eclectic Medical Institute Cincinnati 1868 aged 84 died June 16

James M Moore Marietta Ga Medical College of Georgia Augusta 1871 aged 72 died June 23

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

BORACETINE

"Boracetine," is manufactured by F E Barr & Co, Chicago In a large advertising campaign in the fall of 1919, it was heralded as "The Guardian of Health" Some of the claims made for the product were

'Recommended by Doctors and Dentists Everywhere'

'Boracetine keeps the mouth, throat and nasal passages clean and sweet and prevents the growth of germ life by antisepticiz ing the tissues and membranes of these parts'

"It is an *all around* antiseptic especially good for pyhorrea [*sic!*], sore gums sore throat, etc excellent for cuts bruises in sect bites skin eruptions and in fact any condition where an effi ient healing agent and germ de stroyer is needed"

In addition, the use of Boracetine was recommended to "get rid of that 'dark brown taste'" By inference rather than by direct statement the advertisements also claimed that Boracetine would prevent "influenza, consumption, scarlet fever, diphtheria, pneumonia, hay fever, bronchitis, measles and many other diseases" An original package of Boracetine was examined in the Association's chemical laboratory and the report of the chemists follows

CHEMISTS' REPORT

"A specimen of Boracetine (F E Barr & Co, Chicago) was examined and found to be a slightly yellow liquid having the odor of thymol or eucalyptol Both the odor and taste were much like that of the Antiseptic Solution of the National Formulary (*Liquor Antisepticus, N F*) The label declared the presence of 20 per cent alcohol

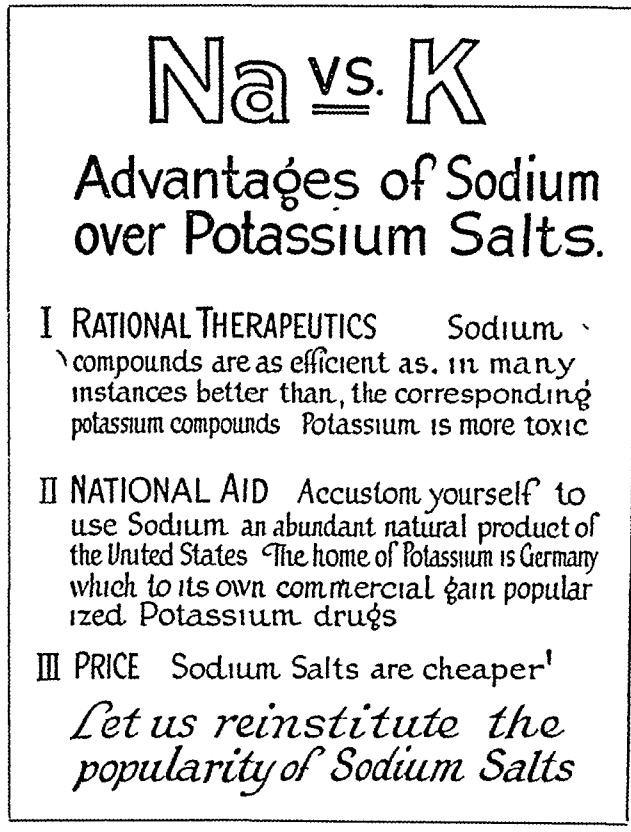
"Boracetine was found to have a specific gravity, at 25 C, of 0 9859 and was neutral or faintly acid to litmus Qualitative tests showed the presence of boric acid (some borate may also have been present), benzoic acid or a benzoate, formaldehyde, magnesium, sodium, traces of salicylic acid or a salicylate, some carbonate, and traces of some alkaloid When allowed to dry in a desiccator over sulphuric acid and phosphorus pentoxid Boracetine gave a residue amounting to 2 3 gm in 100 c c The total borate expressed as boric acid was 1 95 gm in 100 c c The total chloroform extract from strongly acidified Boracetine was 0 4078 gm in 100 c.c

"When extracted with chloroform, an oily residue was obtained, having, when dried spontaneously, a spicy odor suggesting both cinnamon and cloves Boracetine was acidulated with sulphuric acid, heated to expel alcohol and extracted with chloroform to remove oils, etc The acid solution was then made alkaline with ammonia water and again extracted with chloroform On evaporating the chloroform, a residue was obtained which, when dissolved in acidulated water, gave precipitates with potassium mercuric iodid, iodin solution, and phospho-molybdic acid These precipitates were about as dense as those obtained from a gram of ordinary alkaloids in a pint of water The amount of this residue was so small that its identification was not attempted

"Compared colorometrically by action of Jorissen's Reagent with a solution of formaldehyde of known strength, Boracetine was found to contain about one-tenth of 1 per cent formaldehyde From the above analysis it was concluded the Boracetine was a solution containing about 2 gm boric acid, about 0 5 gm sodium benzoate, about 0 1 gm formaldehyde in each 100 c c, together with aromatic substances, traces of some alkaloid and also sodium salicylate

"Boracetine is like the National Formulary antiseptic solution (*Liquor Antisepticus, N F*) in odor and taste Aside from the presence of formaldehyde, it is like it in composition also, since the N F preparation contains 2 5 gm boric acid, 0 6 gm sodium benzoate and 0 120 gm sodium salicylate in 100 c c, quantities which approximate those found in Boracetine"

From the chemists' report, then, it appears, that this preventive of consumption, scarlet fever, diphtheria, etc., this "efficient germ destroyer," is no more wonderful than some *Liquor Antisepticus, N F*, with a dash of formaldehyd The more "patent medicines" that are analyzed, the more obvious becomes the commercial wisdom of the nostrum interests in fighting formula disclosure Secrecy and mystery are indeed the backbone of the "patent medicine" industry Consider the woful state of the advertisement copy-writer who had to romance about *Liquor Antisepticus* with a dash of formaldehyd, but "Boracetine"—well, that's different! *Omne ignotum pro magnifico!*



This is a greatly reduced reproduction of one of numerous educational posters shown at the New Orleans session in the exhibit of the Chemical Laboratory of the American Medical Association Potassium as compared with sodium is relatively speaking a foreign substance in the body Potassium and sodium salts are prescribed mainly for the effect of the radicle they carry It is illogical therefore to administer *potassium* acetate or *potassium* bromid when *sodium* acetate or *sodium* bromid can more readily be given In spite of the smaller demand sodium salts are on the whole cheaper than potassium salts and should the medical profession prescribe the sodium salts more generally undoubtedly all of those that might be used in medicine would be less expensive than the corresponding potassium salts

Work for the Tuberculous—D A Stewart (*Am Rev Tuberc* 4 292 [June] 1920) remarks that a fairly general agreement as to the guiding principles of sanatorium treatment for pulmonary tuberculosis has been reached by men of experience These principles are as definitely standardized as those of surgery, but they are not as familiar to the medical profession or to the general public as the principles of surgery and they run counter to many old prejudices, as indeed the principles of modern surgery did a generation or more ago The essentials of the treatment of tuberculosis are frequently—and wrongly—stated to be 'food and fresh air" The real essential, as sanatorium men all know, is regulation of rest and exercise—of energy conservation and expenditure One tuberculous patient must not raise his hand to his head unnecessarily, another may do a day's work with benefit Between these two are ranged all who have active or even fairly arrested tuberculosis, and the placing of a man where he belongs is a matter of experience, study and skill He who can direct wisely regarding rest and exercise can treat tuberculosis He who cannot do this can only maltreat tuberculosis Only he who can bring to the treatment of tuberculosis thought, experience and skill, has a right to try to direct the treatment or after employment of the tuberculous

Correspondence

THE MEDICAL PROFESSION A SUBSTITUTE FOR THE SALOON

To the Editor —The following resolution was passed and signed by the entire membership of the Beloit Physicians' and Surgeons' Club It appears to me that this should be the stand taken by the physicians in general throughout the country, and as we are getting a "black eye" by the careless prescribing of intoxicating liquors, I wish you would publish this resolution

WHEREAS By constitutional amendment the United States has adopted a prohibition law and

WHEREAS The legal right to prescribe and dispense intoxicating liquor is in the hands of the physicians of our country be it

Resolved That we the members of the Beloit Physicians and Surgeons Club as patriotic citizens of the United States do hereby place ourselves on record as absolutely upholding the letter of the law and do hereby agree not to dispense or prescribe any intoxicating liquors except in cases of extreme need, that this club will aid the federal government in every way possible in the enforcement of this law

This resolution appeared in the Beloit *Daily News,* June 18, 1920 The Beloit Physicians' and Surgeons' Club has received numerous letters congratulating it on the stand taken in this matter, and I know it is the stand of the medical profession at large Certainly, the medical profession never will take the attitude of being a substitute for the saloon

C F N SCHRAM, M D, Beloit, Wis

PRELIMINARY NOTE ON A NEW AND PHYSIOLOGIC METHOD OF "ARTIFICIAL" FERTILIZATION

To the Editor —I desire to record a method of so-called artificial fertilization which I believe to be not only practicable but obviously advantageous in certain cases

In some instances of azoospermia it has been recommended to obtain the semen from some individual other than the husband, insemination being accomplished by injecting the fluid into the cervix Only an intense desire for progeny on the part of the female and complaisance on the part of the husband justifies this procedure The knowledge of the fact that the material is obtained from a heterogenous source is likely to be disquieting to a sensitive female, to say nothing of the unphysiologic nature of the process It is my belief that both of these objections can be overcome by the following simple method

A small incision can be made on either side, exposing the vas, as in vasostomy The seminal fluid from a healthy individual, which obviously is easily obtained, is to be injected into the seminal vesicle in precisely the same way as the colloid preparations of silver are used for the cure of vesicular infection Coitus may be performed immediately, or even within a reasonable period, thereafter, the act not being interfered with by the slight disturbance of the tissues incidental to the exposure and injection of the vas By this method the opportunity for impregnation is afforded in a perfectly natural and physiologic manner free from esthetic objections on the part of the female

In following the foregoing plan, the source of the spermatozoa may be revealed or not, at the discretion of the husband While I have performed no experiments as yet, I am of opinion that, granting a comparative freedom of the vesicles from infection, with a patent vas on the proximal side of the point of injection, the spermatozoa from an alien source probably will thrive quite as well in the vesicle of the recipient as in that of the donor The injected spermatozoa are not so "alien" to their new habitat as spermatozoa always are to the generative tract of the female It is evident that this method would be available only in selected cases In instances in which the seminal vesicles of the husband are seriously diseased and both vasa deferentia occluded above the point available for vasostomy, the method could not be used successfully When the sterility of the male is associated with sufficiently abnormal vaginal secretions which destroy the spermatozoa *the method would not be available* In cases in which not only is the husband sterile but also mechanical obstructions exist in the wife's cervical canal, the method could be supplemented by taking the semen from the vagina after coitus and injecting it into the uterus

My object in making this preliminary note is merely to put it on record, pending such opportunities as may present themselves to put it into actual practice Experiments to determine the feasibility of the method so far as concerns the conveyance of the spermatozoa during coitus are very easily accomplished

G FRANK LYDSTON, M D, Chicago

USE OF PITUITARY EXTRACT IN SECOND STAGE OF LABOR

To the Editor —I have just read, in the report of the meeting of the American Gynecological Society (THE JOURNAL, July 3 1920, p 56), the abstract of Dr Benjamin P Watson's discussion of induction of labor by the use of pituitary extract His attitude conveys the idea to my mind that the use of large doses of the drug, begun and repeated several times, before the cervix has become effaced, is perfectly safe This is so decidedly contradictory to my ideas that I cannot refrain from criticizing Dr Watson has been lucky if he has used this drug in the early part of the second stage for a long period of time with no evil results The use of a Voorhees bag is considered a better method by most obstetricians, unless I am much mistaken, and is preferable to the method suggested by Dr Watson I believe that this criticism is justified by the fact that were his suggestion accepted and followed by large numbers of practitioners, disastrous results might occur in many cases

RAYMOND L BRADLEY M D, Houston, Texas

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

ECHINACEA

To the Editor —I have just received this circular What is the echinacea that will do such wonders? What is the evidence to warrant the claims? It ought to be easy to get the scientific evidence if there is any If you answer in THE JOURNAL, please omit my name

G S M D

ANSWER —The circular referred to by the correspondent is entitled Skin Lesions of Unknown and Uncertain Origin' It is devoted to the exploitation of Echitone a preparation put out by Strong Cobb & Co which is stated to contain echinacea blue flag and pansy Several years ago the Council on Pharmacy and Chemistry examined Echitone and rejected the product because unwarranted therapeutic claims were made for it and for other reasons (THE JOURNAL Jan 2 1915 p 70) The drug echinacea or purple cone flower has been claimed to be a specific for rattlesnake bite syphilis typhoid malaria diphtheria and hydrophobia Later enthusiasts have credited it with equally certain curative effects in *tuberculosis tetanus and exophthalmic goiter* as well as with the power of retarding the development of cancer In view of the extraordinary therapeutic claims made for echinacea in 1909 the Council [illegible] study of the subject and concluded [illegible]

dence was needed to warrant the use of this drug by the profession (THE JOURNAL, Nov 27, 1909, p 1836) In 1913 the Council reported that no satisfactory evidence of the therapeutic value of echinacea had been made available since the date of its previous investigation (THE JOURNAL, Jan 4, 1913, p 69) So far as can be learned to date, no reliable evidence for the claims made for this drug have been presented since the publication of the Council's reports Echinacea is one of the many vegetable drugs introduced by the eclectics without a rational basis for their use

LITERATURE ON LETHARGIC ENCEPHALITIS

To the Editor —Kindly give me references to articles on lethargic encephalitis HERMAN TROSSBACH M D Hasbrouck Heights N J

ANSWER—The following articles have appeared in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION during the last year

Loewe Leo and Strauss Israel Diagnosis of Epidemic Encephalitis May 15 1920 p 1373
Garnett A Y P Lethargic Encephalitis as a *Complication of* Pregnancy and Labor May 8 1920 p 1315
Encephalitis in Horses editorial, April 24 1920 p 1172
Bassoe Peter The Delirious and the Meningoradicular Types of Epidemic Encephalitis April 10 1920 p 1009
House S J Observations on a Green Producing Coccus from the Brain in a Case of Encephalitis March 27 1920 p 884
Flexner Simon Lethargic Encephalitis History Pathologic and Clinical Features and Epidemiology in Brief, March 27, 1920 p 865
Reilly T F Hitherto Undescribed Sign in Diagnosis of Lethargic Encephalitis March 13 1920 p 735
Schulze Margaret Encephalitis Lethargica in Pregnancy, March 13 1920 p 732
House William Epidemic (Lethargic) Encephalitis, Feb 7 1920 p 372
Loewe Leo and Strauss Israel Etiology of Epidemic (Lethargic) Encephalitis Oct 4 1919 p 1056
Wegeforth Paul and Ayer J B Encephalitis Lethargica July 5 1919, p 5
Tucker B R Epidemic Encephalitis Lethargica or Epidemic Somnolence or Epidemic Cerebritis with Report of Cases and Two Necropsies May 17 1919 p 1448
Ely F A Lethargic Encephalitis Preliminary Report April 5 1919 p 985
Bassoe Peter Epidemic Encephalitis (Nona) April 5 1919 p 971
Epidemic or Lethargic Encephalitis Acute Infectious Ophthalmoplegia Acute Encephalitis Nona? editorial March 15, 1919 p 796
Epidemic or Lethargic Encephalitis (Nona) special article March 15 1919 p 794
Pothier O L Lethargic Encephalitis March 8, 1919, p 715

BLOOD AND RESPIRATORY CHEMICAL DETERMINATIONS

To the Editor —1 Please give the name of some small laboratory guide treating on the latest methods of blood and respiratory chemical determinations

2 In the Epstein modification of Lewis and Benedict s sugar blood test is it necessary to heat the picric blood sugar mixture over a free flame in the process of concentration just before and after the sodium carbonate is added? We have made the concentration over a steam bath and have not been able to detect any difference in the readings

3 Is it necessary to use a rubber bag in determining the alveolar carbon dioxid tension of alveolar air according to the method of Dr Marriott or can accurate results be obtained by having the patient exhale several times through a tube into the bicarbonate solution direct?

4 Is it possible to purchase the celloidin sacks used in the alkali reserve of blood plasma and the H ion concentration tests? Where may these be purchased?

Please omit name and address X Y Z

ANSWER—1

Medical War Manual No 6 Laboratory Methods of the U S Army Edition 2 Philadelphia Lea & Febiger $1 50
Rockwood E W A Laboratory Manual of Physiologic Chemistry Edition 4 Philadelphia F A Davis & Co $2 00

2 It is not necessary
3 A rubber bag should be used
4 Try the Central Scientific Company, 460 East Ohio Street, Chicago, Hynson, Westcott and Dunning, Baltimore, or any other good medical supply house

EXCEPTIONS FOR PHYSICIANS IN PARKING ORDINANCE

To the Editor —Our city has recently passed an ordinance prohibiting the parking of cars down town We are trying to get them to make an exception for physicians Will you let me know what cities do this? W H OWENS M D Atlanta Ga

ANSWER—So far as we know Billings, Mont, Easton, Pa, Greensboro, N C, and Fresno Calif have special exceptions for physicians in their parking ordinances

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA Juneau Sept 7 Sec Dr Harry C De Vighne Juneau
HAWAII Honolulu, Sept 6 10 Sec Dr R W Benz, 1141 Alakea St, Honolulu
NEW HAMPSHIRE Concord, Sept 9 10 Sec, Dr Charles Duncan, Concord

A GRADUATE COURSE IN ORTHOPEDIC SURGERY

A report states that the Harvard Medical School is planning to establish a graduate course in orthopedic surgery The course will be open, mainly, to graduates in medicine who have completed service as house officers in surgery in approved hospitals The course is planned to cover eighteen months, of which six months will be spent in the laboratories of the Harvard Medical School, six months in the Children's Hospital, and six months in the Massachusetts General Hospital The sequence will depend on the vacancies in the hospitals but as a rule the laboratory training will be in advance of the clinical work The laboratory portion of the course will be left sufficiently flexible to supply the varying needs of the applicants—a need greatly emphasized by experiences of a large number of medical officers in this special field during the war In order to pursue the clinical work to the best advantage it was decided that something should be done to correct any deficiencies of training in the fundamental branches At the same time, the instruction will be of an advanced character rather than elementary The candidates will be started at the hospital portion of their course at various times during the year, since hospital facilities necessitate the appointment of men periodically during the twelve months Since only a small number of students can be handled, they will be selected with great care The charge for the course will be kept at a nominal figure, and this will be only for the laboratory portion of the course It may be that fellowships can be provided for some, if not all, of the students who may be enrolled It is believed that the course as outlined will provide an opportunity for a number of special students to secure an excellent training in their chosen specialty

Educational Policy in China

What is reported as the largest medical conference ever assembled in the capital of China was held February 21-28, of the present year Over 300 delegates were present, including 210 medical missionaries A message from the minister of education of China was read which stated the following as the educational policy for the immediate future in that country

1 To establish new medical schools as soon as conditions will allow on the basis of one medical school for each province

2 To improve and extend such schools as were already established.

3 To encourage the study of medicine and to maintain for the scientifically trained doctors a high social status aiming at a sufficient number for this important profession

4 To cause to be organized at proper localities such institutions or facilities of investigation as will aid specialists in their research work, and

5 To regulate the practice of doctors trained in the traditional way with a view to the unification of standards required of medical practitioners

Delaware June Examination

Dr P S Downs, secretary, Delaware Regular State Board of Medical Examiners reports the written and practical examination held at Wilmington June 16-18, 1920 The examination covered 10 subjects and included 100 questions An average of 75 per cent was required to pass One graduate of Temple University, 1918 was examined and failed

Book Notices

THE PROBLEM OF THE NERVOUS CHILD By Elida Evans Introduction by C G Jung M D, LL D Cloth Price $2 50 Pp 299 New York Dodd Mead & Co 1920

Physicians realize that some of the disturbances of children, as many of the functional disturbances of adults have their origin in early experiences Perhaps, through the influence of Freud, this point of view has been exaggerated, on the other hand there is no doubt that an intimate analysis of the child's habits and its relations to its friends, relatives and its general environment frequently reveals the underlying factors that manifest themselves in systemic upheavals Among the most recent of several new books on the general subject is this work which has the distinction of an introduction by Jung The introduction is one of those graceful prefaces which merely state that the author seems to be well acquainted with the subject, and can therefore be granted reliance The book yields no evidence as to the experience or official position of the author, except that she herself was for some time a pupil of Jung Of all the books thus far available on the nervous child this one places most attention on the infantile sexuality and libido It is hardly a book of value for the general public because of the overemphasis of the sexual side, for the physician or educator who can use it with proper appraisal of the arguments and facts presented, it will make interesting if not altogether valuable reading

THE YOUNG PHYSICIAN By Francis Brett Young Cloth Price $2 50 net Pp 320 New York E P Dutton & Company, 1920

The author dedicates his book to Thomas Brett Young, M D, his father, from whom, undoubtedly he must have secured much of the medical material which it contains, for, like few other novels, everything medical in this book is accurate and real The book tells the life story of a young man from his first day in preparatory school to the first few years of his practice as a physician The first half of the book, which is especially interesting is a fascinating psychologic study of the development of boy character The middle portions of the book seem somewhat dull and halting, but the final portions, taking up entrance into the medical school with intimate scenes of dissecting room laboratory and clinic are thrilling with real life well described The book will be of interest to physicians as a literary exposition of what each of them has lived through An enthusiastic advertisement compares the style of Mr Young to that of Conrad, which is not complimenting Conrad

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS By George William Norris A B M D Assistant Profes or of Medicine in the University of Pennsylvania and Henry R M Landis A B M D Assistant Professor of Medicine in the University of Pennsylvania With a Chapter on the Electrocardiograph in Heart Disea e by Edward B Krumbhaar Ph D M D Assistant Professor of Research Medicine in the University of Pennsylvania Second edition Cloth Price $8 net Pp 844 with 433 illustrations Philadelphia W B Saunders Company 1920

In this edition has been added a discussion of spirochetal bronchitis, influenza, streptococcus empyema, chronic inflammatory conditions of the lungs of uncertain etiology calcification of the lungs, pneumopericardium etc In other words, it is brought completely up to date This excellent work was given full and favorable review in THE JOURNAL, Dec 29, 1917 and what was then said in endorsement of the book would be repeated here, if necessary

A DIABETIC MANUAL FOR THE MUTUAL USE OF DOCTOR AND PATIENT By Elliott P Joslin M D Assistant Professor of Medicine Harvard Medical School Second edition Cloth Price $1 75 Pp 191 with illustrations Philadelphia Lea & Febiger 1919

The second edition of this book has been thoroughly revised, condensed and simplified It is a safe book to place in the hands of diabetic patients Physicians will believe with Dr Joslin that, for one diabetic patient who learns too much about the disease, there are unquestionably ninety-nine who know too little, and that those patients who are most intelligent and who understand their disease best live longest

LA TENSION ARTÉRIELLE EN CLINIQUE SA MESURE SA VALEUR SÉMÉIOLOGIQUE Par le Dr L Gallavardin Medecin des Hopitaux de Lyon Second edition Paper Price 30 francs net Pp 717 Paris Masson & Cie 1920

This edition, published ten years after the first is in reality a new book The author has brought the subject up to date and has included the results of his own clinical experience The work contains a full discussion of the principles underlying arterial tension and the various methods of estimating it The last two thirds of the book treats of the clinical features of the condition with an adequate consideration of therapy The book is a reliable and complete exposition of this important subject

A MANUAL ON FOOT CARE AND SHOE FITTING FOR OFFICERS OF THE U S NAVY AND U S MARINE CORPS By W L Mann Ph B A M M D Lieutenant Commander (M C) U S Navy and S A Folsom M D Lieutenant (M C) U S Navy Cloth Price $1 75 net Pp 124 with 58 illustrations Philadelphia P Blakiston's Son & Co 1920

This is one of the handy manuals for the definite purpose mentioned in the title Its directness and brevity appeal both to the busy practitioner and to the specialist

Medicolegal

Competent Medical Witness and Evidence of Insanity

(*Beasley v Faust (Texas) 217 S W R 179*)

The Court of Civil Appeals of Texas says that in this action on a note and mortgage executed by the defendant for whom the defense of insanity was made a physician testified that he thought the defendant had been insane all the time from the fall of the Wilson campaign to the time of the trial This testimony was objected to on the ground that the witness did not qualify as an expert and because he was testifying to his opinion concerning the mental condition of the defendant at a time when he had not observed him The physician had practiced medicine for fifty-five years and had ample opportunity to observe the defendant during the years concerning which he testified but was unable to state that he had observed him at the time of the execution of the note and mortgage He had not specialized in the treatment of mental diseases but had treated a good many persons who were insane He had read textbooks on insanity, and his opinion whether insanity was curable was based on observation and textbooks He modestly admitted that he did not know what kind of insanity the defendant had and this admission was considered by the plaintiff to be sufficient to deprive him of standing as a skilled witness As the court understands the authorities the physician fully qualified as a skilled witness who was entitled to give his opinion of the mental condition of the defendant not only at such times as he observed him but also at the time he executed the instrument in question his opportunities for observing and conversing with the defendant before and after such times being such as to justify him in forming the opinion expressed The specialist in diseases of the mind may be able to classify with reasonable accuracy all cases of insanity which come under his observation but it is not necessary that the physician should be a specialist in order to testify as a skilled witness

Nor was there error in permitting the physician to testify that the defendant from about 1912 to the date of the trial would not be conscious of the effect his acts would have on him or surrounding circumstances The objection was urged that this testimony was a legal conclusion of the witness but the testimony was not subject to that objection No knowledge of any rule of law was necessary in order to answer the question The answer involved only an opinion concerning the extent or degree of the mental unsoundness of the defendant The expression of an opinion that a person did not have sufficient capacity to make a will or deed or to transact business has been held improper by the courts of Texas and these holdings are in accordance with the right

of authority To make a valid will or contract, a certain amount of mental capacity is required by the rule of law to be applied testing the validity of the transaction, and for a witness to say that a person has the requisite capacity implies that such witness knows the rule of law and is applying it in arriving at his conclusion But it seems obvious that to state that a person would not be conscious of the effect his act would have on him does not imply that the witness has attempted to apply a legal definition to test the validity of any act of the person

It might have been contended that the opinion expressed by the physician was in effect an opinion that on the date of the execution of the note and mortgage the defendant was not conscious of the effect his acts would have on him, and that therefore necessarily he expressed the opinion that the defendant was not conscious of the effect the execution of the note and mortgage would have on him Looking at the matter from that standpoint, the objection might have been urged that the opinion was one on the ultimate fact to be determined by the jury However, that objection is not tenable if the opinion relates to a matter within the scope of expert testimony In this case, moreover, the only objection relating to the competency of the evidence was that the opinion involved a legal conclusion Such objection was properly overruled

Construction of Statute Making Hospital Records Admissible in Evidence

(Leonard v Boston Elevated Ry Co (Mass) 125 N E R 593)

The Supreme Judicial Court of Massachusetts, in overruling an exception to permitting to be read to the jury that portion of the records of a hospital to which the plaintiff was taken after he was injured which contained the statement, "odor of alcohol on breath," says that this required the construction of the Massachusetts statute which requires certain hospitals to keep records of the treatment of the cases under their care and their medical history and provides that such records shall be admissible as evidence in the courts of the commonwealth so far as such records relate to the treatment and medical history of such cases, but nothing therein contained shall be admissible as evidence which has reference to the question of liability In construing this statute the court cannot accept the view of the plaintiff that the hospital record is inadmissible if it may have "reference to the question of liability," even though it directly relates only to the treatment and medical history of the case" A reasonable interpretation must be given to both these clauses in the statute Apparently the legislation making this hearsay evidence admissible was enacted primarily to relieve physicians and nurses of public hospitals from the hardship and inconvenience of attending court as witnesses to facts which ordinarily would be found recorded in the hospital books Under this statute only such portions of the record are admissible in evidence as relate to the treatment and medical history of the patient The difficulty in applying the act arises from the nature of the entries made in hospital records It frequently must happen that facts stated therein which deal in the main with the patients' medical history, may also be relevant to the issue of liability, in the event of litigation For instance, a statement of the location and nature of the patient s injuries, primarily an essential element in the history and treatment of his case, may incidentally tend to confirm or disprove his claim as to how the accident happened So the condition of intoxication, in the case of a patient suffering from delirium tremens, would be an important element of his medical history and treatment, at the same time it well might bear on the issue of liability in an action to recover under the civil damage law In the court's opinion, a reasonable and practical construction of the statute requires that a record which relates directly and mainly to the treatment and medical history of the patient should be admitted, even though incidentally the facts recorded may have some bearing on the question of liability The improper application of the facts recorded can be prevented by means of suitable instructions to the jury The court is unable to say as a matter of law that in the present case the "odor of alcohol on the breath" could not relate to the plaintiff s medical history So far as appeared, the usual physical examination may have been a material fact to consider in making a diagnosis of his condition

Right of Physician to Sue Employer Not Taken Away

(Noer v G W Jones Lumber Co (Wis) 175 N W R 784)

The Supreme Court of Wisconsin affirms a judgment in favor of the plaintiff, a physician, for services rendered in treating, and furnishing hospital accommodations to, an employee of the company injured under circumstances making the defendant liable for compensation under the workmen's compensation act, and notwithstanding that it was contended that the court had no jurisdiction of the case The supreme court says that, when the plaintiff presented his bill, payment was refused on the ground that it was excessive, and a request was made that the matter be referred to the industrial commission for adjustment, which was refused by the plaintiff It was argued for the defendant that, the services having been rendered to an injured employee at the request of the employer, no liability existing on the part of the employer to furnish such services except by virtue of the workingmen s compensation act all of which was known to the plaintiff, exclusive jurisdiction was vested in the industrial commission to pass on the reasonableness of the charges made for such services and that the plaintiff could not maintain an action at law to recover therefor This contention was unsound

The workmen s compensation act deals exclusively with matters growing out of the relation of employer and employee The provisions of the act are binding on employers and employees electing to be bound by them and on none others All except employers and employees are strangers to the act and their usual lawful rights and remedies are unaffected by it True, it is made the duty of the employer to provide certain medical attention to its employees, but the act does not provide that he who renders such medical services at the request of the employer must submit the reasonableness of his charges in that behalf to the industrial commission for its approval and allowance The physican rendering such services is no more deprived of his right to resort to the courts for the establishment and collection of his claim than though the services had been rendered to the employer personally The fact that neither employer nor employee, those for whom the act was primarily designed is affected by its provisions against their consent, coupled with the further consideration that no method is provided by which a physician may consent to be bound by the terms of the act would strongly negative the inference that the act was intended to have the effect for which the defendant contended

The provision in the act that the industrial commission shall have jurisdiction to pass on the reasonableness of medical and hospital bills in all cases of dispute in which compensation is paid, in the same manner and to the same effect as it passes on compensation, confers on the industrial commission authority to pass on and determine the amount which the employer shall pay the employee when the employer has failed in his duty to provide proper medical attention, which was provided by the employee himself Under such circumstances the reasonable value of the services, as determined by the industrial commission, measures the amount which the employer must pay to the employee for this item of compensation but the physician rendering the services is in no manner bound by such determination when he proceeds to collect from the employee His remedy in the courts is left unimpaired, and he may maintain his action therein for the value of his services as he conceives them to be

Having discovered no legislative justification in the workmen's compensation act to deprive physicians, rendering services under the circumstances here presented, of their legal rights and remedies, the court finds it unnecessary to consider the question of the power of the legislature to confer on the industrial commission the exclusive jurisdication for which the defendant contended

Society Proceedings

COMING MEETINGS

Colorado State Medical Society Glenwood Springs Sept 7 9
Missouri Valley Medical Society of the Omaha Neb Sept 6 7
Utah State Medical Association Ogden Sept 7 8
Wisconsin State Medical Society of La Crosse Sept 8 10
Wyoming State Medical Society, Cheyenne Aug 9 10

OHIO STATE MEDICAL ASSOCIATION

Seventy Fourth Annual Meeting held at Toledo Ohio June 1 3 1920

The President, DR J F BALDWIN, Columbus, in the Chair

Therapeutic Possibilities of Blood Transfusion Methods, Indications and Results

DR E R ARN, Dayton Hard and fast rules cannot be drawn about the possibilities of blood transfusion The physician must be guided by the single purpose of doing the most good at the minimum risk Many lives are lost either by not transfusing at all or by doing it too late The illness of many patients could be shortened materially by blood transfusion, operations could be made less hazardous, and recovery could be hastened and made less burdensome When bleeding has been abrupt and excessive, a blood transfusion is indicated because it alone can raise and sustain the blood pressure It is a good working rule to transfuse if the blood pressure falls as low as 70 mm of mercury, since life is hardly possible with a pressure below that limit The citrate technic is the method of choice In cases of hemorrhage of the new-born, transfusion is a specific In cases of pernicious anemia, it yields results superior to any other mode of therapy and frequently acts as a life-saving measure by initiating the onset of a remission Most of the dangers of transfusions can be prevented by avoiding the use of incompatible blood, excessively large injections, and emboli of air or blood clot

Medical Aspects of Blood Transfusion

DR LOUIS A LEVISON, Toledo The conditions in which aid of a lasting nature may reasonably be expected from blood transfusion are disappomtingly small In fact, it may be said that blood transfusion does not cure any disease The only exception to this would probably be certain hemorrhagic states in early infancy However, blood transfusion is life saving in many conditions in which hemorrhage is present as a symptom Occasional deaths ensue even after all the requirement of grouping have been met Only the most extreme emergency warrants a blood transfusion without determining the compatibility of the donor and the recipient In view of the reactions of successive transfusions involving the same participants, a separate determination of type should be made prior to each injection The benefit derived is probably due to the rise in hemoglobin percentage and not to the mass bulk of the blood itself Sooner or later blood transfusions cease to bring about remissions in anemias, but before this time there are usually pronounced cord signs to indicate the hopeless nature of the disease A field yet to be explored is the use of transfusion employing immunized blood in serious, chronic infections, especially those associated with endocarditis

Craniocerebral Injuries

DR THERON S JACKSON, Cleveland Cranial injuries are almost always emergencies, and those who handle them must be ready to make a rapid, systematic examination, accurate enough to enable them to use the correct treatment for the individual case Cushing's classification of craniocerebral injuries is as applicable to civil practice as to the surgery of war One of the chief difficulties encountered is the evaluation of cases of concussion Skull fractures and cerebral hemorrhage are so frequently masked by concussion that they must always be suspected In the differential diagnosis I have learned to rely on a rising pulse pressure associated with a falling pulse rate as a definite indication for operation Delay until symptoms of medullary compression arise spells disaster Valuable diagnostic information may also be obtained from the incidence of papilledema and the results of lumbar puncture, reflex reactions and stereoscopic roentgenograms Apparently mild injuries may eventuate in profound cerebral complications, while seemingly much more severe external injuries may recover without surgical interference We should always be prepared to perform a craniotomy at the earliest moment that a diagnosis of cortical irritation or compression is justified According to the best available statistics the end-results following operation whenever there has been a reasonable suspicion of intracranial injury have been much better than those following palliative treatment

The Laryngologist and Diseases of the Lungs

DR JOHN A THOMPSON Cincinnati The direct, local treatment of inflammatory diseases of the lungs gives results that cannot be obtained in any other way The training and skill of laryngologists fits them especially to give this treatment The diseases of the lungs in which local treatment is useful are acute and chronic inflammation of the trachea and bronchi, bronchiectasis, bronchial asthma, pulmonary tuberculosis pulmonary syphilis and emphysema The recovery from pneumonia, either bronchial or lobar, can be aided greatly by local treatment For an ordinary injection I prefer the following mixture atropin, 1 grain, epinephrin, 2 grains, menthol 48 grains, camphor, 80 grains, oil of sweet almonds, 4 ounces and liquid petrolatum, 12 ounces Using 1 or 2 drams for an injection will give a dosage of atropin 1/4 grain, epinephrin, 1/32 grain, menthol, 1 grain, and camphor about 1 1/4 grains Curing bronchitis by direct medication also cures bronchial asthma if treatment has been begun before the lungs become emphysematous or the heart has been weakened beyond repair In pulmonary tuberculosis, no direct curative effect on the disease can be expected from local medication but the complicating laryngitis and bronchitis can be helped and the paroxysms of coughing decreased by half A healthy mucosa will not be infected by the tuberculous sputum and the fatal laryngeal tuberculosis can be prevented by regular injections Also the control of the cough makes it unnecessary to give narcotics, and the nutrition of the patient is not impaired by medication

Surgical Phases of Cancer Problem

DR FRANK WARNER Columbus Cancer is the most fatal disease of adult life Of those who reach the age of 40 years, one person in eleven dies of cancer Cancer is neither hereditary contagious nor transmissible At the outset it is a purely local condition easily cured by radical operation A large number of the cases reach the surgeon only when terminal symptoms of the disease are present The public should be thoroughly informed regarding the necessity for early diagnosis and prompt operation The knife should always be used in early cases of cancer Care should be exercised not to spread cancer cells onto raw surfaces during operation as they grow readily Heat, the roentgen ray and radium should be reserved for handling inoperable cases

Treatment of Hyperthyroidism with Corpus Luteum

DR H H HOPPE Cincinnati I have been using corpus luteum in the treatment of hyperthyroidism for six years One of the patients has died of influenza, all the others are doing well and some of them seem to have reestablished a normal balance of the endocrine glands and no longer take corpus luteum while others are comfortable only when they take the remedy The most notable and rapid improvement following the use of corpus luteum is seen on the part of the cardiovascular symptoms and general nervous manifestations While I regard corpus luteum as a specific in exophthalmic goiter I have not discontinued symptomatic treatment or the attention to hygiene and diet I usually give corpus luteum 2 grains, quinin hydrobromate, 3 grains, and extract of belladonna 1/10 grain after each meal On improvement the dosage is reduced to two capsules a day and then to one dose at bedtime. The theory on which this treatment is based is that hyperthyroidism is caused by a defective secretion of the interstitial sex glands and the

have an inhibitory and regulatory action on the secretion of the thyroid, and that when their function is deficient there is a lack of physiologic inhibition of the thyroid with an excessive secretion, and, therefore, hyperthyroidism In other words, hyperthyroidism and hypo-ovarianism are synonomous conditions

(To be continued)

AMERICAN PEDIATRIC SOCIETY

Thirty Second Annual Meeting Held in Highland Park Ill May 31 June 2 1920

(Concluded from page 129)

Dyspituitarism So-Called Absorption of Membranous Bones, Exophthalmos and Polyuria

DR ALFRED HAND, Philadelphia A boy, aged 4 years, had a tumorlike swelling of the left parietal region removed at the age of 2 There was absence of bone under the tumor down to the dura, Section revealed a slight degree of inflammation, but mainly a myxomatous change Since then other swellings had appeared, and exophthalmos, which was greater on the right, but as yet there had been no polyuria

Use of Fresh Vaccines in Whooping Cough

DR ROWLAND G FREEMAN, New York In sixteen children, pertussis vaccines were used at various periods of the disease In five, no results were obtained, three received the vaccines early in the disease, and two very late Of the remaining eleven cases, nine showed a very material improvement and in four a practical cure was obtained Quite remarkable results obtained in certain beginning cases have convinced me that these vaccines should have an extended use, particularly in institutions where controls might be used to demonstrate whether we might not have in these vaccines a valuable method of reducing the large mortality from whooping cough Dr Huenekens' antibodies were not present after the injection of whooping cough vaccines unless the vaccines were freshly prepared

Rickets

DRS JOHN HOWLAND and EDWARDS A PARK, Baltimore A definite correlation exists between the roentgen-ray signs and the actual pathologic conditions Calcium deposits in the cartilage cast well-defined shadows The effectiveness of cod liver oil as a therapeutic agent in rickets is demonstrated In animal experiments a beginning calcium deposit can be demonstrated two days after beginning the administration of cod liver oil In human beings the calcium deposit in the cartilage is definitely demonstrable at the end of three weeks after beginning the administration of cod liver oil

DISCUSSION

DR. W MCKIM MARRIOTT, St Louis In order to gain some knowledge of the nature of the process which causes a deposition of lime salts, we have made a solution containing all the inorganic constituents of blood plasma, an "artificial blood," containing phosphates, lime, magnesium salts, sodium bicarbonate and carbon dioxid, the latter being at a tension of 40 mm Such a solution is perfectly clear, but a precipitate occurred when a portion of the carbon dioxid was removed or if more bicarbonate, calcium salts or inorganic phosphate were added The precipitates obtained in these various ways had each different compositions The only precipitate that had a composition the same as that of bone was obtained by increasing the amount of phosphate in solution A very small increase in the amount of phosphate in solution caused a considerable precipitate of the substance having the approximate composition of bone It would seem likely, therefore, that the method by which bone is laid down in the body is by an increase in the amount of phosphate present at some point, and that a mere increase in alkalinity is insufficient Such being the case, it would be interesting to know whether or not the phosphate content of the blood is increased following the administration of cod liver oil

DR. H J GERSTENBERGER, Cleveland We have fed 1 200 or more babies on a synthetic milk, containing 10 per cent fat in the form of cod liver oil, and we have as yet to see the first case of spasmophilia or rickets among the children so fed

DR CLIFFORD G GRULEE, Chicago Dr Phemister showed that feeding of phosphorus to normal children has produced a thickening of the ends of the bones very much the same as that produced by cod liver oil A longer feeding of phosphorus caused a greater thickening at the epiphyseal line In these children the phosphorus was used alone and not in combination with cod liver oil

DR JOHN HOWLAND, Baltimore After feeding cod liver oil we found the phosphorus content of the blood greatly increased

Sarcoma of Kidney

DR ROWLAND G FREEMAN, New York A child aged 2½ years, weighing 26½ pounds, had been in failing health for two months A tumor of the kidney on the left side was diagnosed Six weeks after operation the child was very dyspneic, with rales over the entire chest Roentgen-ray examination revealed numerous metastases in the lungs

Case of Portal Thrombosis

DR RICHARD M SMITH, Boston A child aged 3 years, gave a history of acute rise of temperature and cough lasting seven days before admission Several ecchymotic spots were present on the body, together with an enlarged heart, with a systolic murmur heard all over the precordia, an enlarged spleen, low red blood cell count and low hemoglobin The abdomen gradually distended with fluid, the superficial veins in the upper portion became enlarged, and the spleen increased greatly and assumed a transverse position in the abdomen The pulse remained rapid, respiration from 30 to 35 Six weeks after admission the child vomited a large amount of bright red blood The child was transfused several times, but died virtually two months from the onset of the illness No diagnosis was made during life. At necropsy, thrombosis of the portal vein and its great radicles was found, with passive congestion of the spleen, ascites, hypertrophy and dilatation of the heart, edema of the lungs and anemia Undoubtedly the thrombosis was of infectious origin arising in connection with the initial infection of the respiratory tract

Case of Paralysis of the Respiratory Muscles

DR W MCKIM MARRIOTT, St Louis A girl, aged 10 years, six weeks after an attack of diphtheria developed paralysis of the palate, ocular muscles, legs, back and neck muscles and partial paralysis of the arms, and ultimately the diaphragm became involved so that it failed to move at all during inspiration Artificial respiration was given by means of the Erlanger-Gessel air current interrupter connected with a nitrous oxid mask After ten minutes of artificial respiration the child fell asleep and the mask was removed Cyanosis slowly developed and was again relieved by artificial respiration This was kept up more or less continuously for five days, at the end of which time the function of the respiratory muscles began to return and the child was able to breathe without the apparatus She made a complete recovery

Congenital Atresia of Esophagus

DR HENRY L K SHAW Albany In this case necropsy revealed that the upper third of the esophagus ended in a culdesac and had no relation to the lower part, which opened into the trachea

A Case of Lymphosarcoma

DR CHARLES A FIFE, Philadelphia A boy, aged 9 years, gave a negative history until his seventh year, when a slowly enlarging right cervical node was detected On the supposition that the node was tuberculous, the roentgen ray was used Within five months of the cessation of roentgenism, extensive metastases in the tracheobronchial lymph nodes produced massive exudation into the left pleura, but causing no other signs of mediastinal compression There was a tremendous enlargement of the spleen and liver The lymph nodes in the abdomen which were not affected by radiation were full of typical, active tumor cells, while those in the region treated by the roentgen-ray and radium showed retro-

grade changes in the tumor cells, many of which were replaced by dense connective tissue

Primary Sarcoma of Thymus

DR. L. EMMETT HOLT, New York A child, aged 6 months, gave symptoms dating back only four weeks, consisting merely in increased pallor and slight fever There were a few minute hemorrhages over the neck and extremities The case was regarded as one of severe secondary anemia At necropsy a sarcomatous thymus weighing 36 gm was found Besides the sarcomatous change in the thymus, similar lesions were found in a lymph node in the spleen and in the lungs The child presented none of the symptoms associated with enlarged thymus

Case of Anaphylaxis Following an Intradermal Protein Sensitization

DR HENRY J GERSTENBERGER, Cleveland A boy, aged 17 months, who had never received egg in any form developed an extreme anaphylactic shock after an intracutaneous administration of egg yolk allergen and egg albumin in doses of 1 and 2 mg This child who had received cow's milk from the third week of life and had suffered from eczema and asthma, showed a negative intracutaneous test to cow's milk casein and cow's milk albumin The intracutaneous injection of cow's milk allergen responded within twenty-four hours with an indurated and red area of infiltration not unlike that of an ordinary positive von Pirquet test, but entirely different from an urticarial wheal

Blood Findings in a Child Five Years After Splenectomy

DR HOWARD CHILDS CARPENTER, Philadelphia The average results of thirteen blood counts in a white boy, aged 10 years, who had had his spleen removed five years before for familial hemolytic icterus of the Chauffard-Minowski type, show that the red blood cells, which before the operation were down to 2,020 000, have increased to 4 288 000 the hemoglobin, which was as low as 23 per cent before the operation, now is 82 per cent There is still present evidence of bone marrow regeneration as shown by the high color index, the continued leukocytosis, moderate chromophilia and poikilocytosis, high transitional and eosinophil counts, and reticulation of the erythrocytes There is an unusually quick coagulation time and a rather low platelet count indicating in this case either a rapid availability of the platelets for the purposes of coagulation or an increased amount of prothrombin in the platelets, or a large percentage of macroplatelets No Howell-Jolly bodies were found There is also evidence of lymphatic activity shown by absolute lymphocytosis, and by the enlargement of the external lymph glands and the very large tonsils

Duct Sign in Mumps

DR. DAVID MURRAY COWIE, Ann Arbor, Mich In 97 per cent of fifty-seven cases of parotid mumps, a red spot was observed at the orifice of Steno's duct, which developed and disappeared under the influence of the disease The duct itself becomes teatulated The sign develops early in the disease sometimes ahead of the swelling of the parotid and disappears when the duct returns to normal It is influenced by the degree of fever

Misuse of Milk in the Diets of Infants and Young Children

DR B RAYMOND HOOBLER Detroit There is much propaganda by popular writers urging the increased use of milk as a food for the young I believe that this is being overdone and that many mothers are forcing milk in such large quantities on their children that it becomes a positive menace to health, particularly in the group of children between the ages of 1 and 6 years In taking a diet so largely composed of milk, the child is robbed of minerals that should come to it in fresh fruits, vegetables and cereals not to mention the vitamin and antiscorbutic properties which these foods possess

DISCUSSION

DR CHARLES GILMORE KERLEY, New York After a child is 15 months old I give milk only to the amount of 1 pint daily The child fed entirely on milk is likely to be flabby, and in the second, third and fourth year it is likely to have secondary anemia

DR THOMAS S SOUTHWORTH, New York In the agitation for the larger use of milk, the fact that the kind of milk is important has been forgotten, it should be milk free from pathogenic bacteria

DR. E W SAUNDERS St Louis I agree with Dr Hoobler in every respect I never give Jersey cow's milk unless it is well skimmed I can see no valid reason why milk should be raised above a temperature of 140 F., which is sufficient to kill all pathogenic micro-organisms

DR MAYNARD LADD, Boston In feeding milk to children 2, 3 or 4 years of age, we should take into consideration the amount of butter the child is getting The harmful effect of milk is often due to the excessive amounts of butter fed on the theory that the more butter the child eats the better If one feeds a child a quart of milk a day he should be very careful to see that he is not receiving too much butter

Has Malt Soup Extract an Antiscorbutic Value?

DR. HENRY J GERSTENBERGER, Cleveland While studying the respiratory quotient of scorbutic infants it was decided for definite reasons to feed these children on Keller's malt soup extract, a mixture which has made for itself a reputation of producing and never of curing scurvy During this study three infants recovered unexpectedly in a rapid and complete manner This may be accounted for on the theory that this special lot of malt soup extract possessed an antiscorbutic content due to some unwonted occurrence during its manufacture

DISCUSSION

DR. JOSEPH BRENNEMANN Chicago It is difficult to explain why some foods cure scurvy and others do not and why some children are cured by almost any change in diet It would seem that individual susceptibility is a large factor in connection with both the causation and the cure of scurvy

DR J P CROZER GRIFFITH Philadelphia It is beyond question that there must be besides diet, a peculiar disposition to develop scurvy seen in a comparatively small number of infants, otherwise we would find all the infants fed on a certain mixture of proprietary food developing scurvy Malt soup has been a favorite food with me for many years and I have not seen more than two or three children develop scurvy in spite of the fact that no orange juice was administered It is again evident in these cases that there is some element other than diet concerned, and that malt soup is not to be blamed more than other foods

DR CHARLES G KERLEY, New York I have seen more cases of scurvy develop on malt soup than with any other method of feeding

DR THOMAS S SOUTHWORTH, New York This subject should be very thoroughly discussed before the impression is conveyed that malt soup extract is an antiscorbutic In one institution in which this preparation was used for some years because we obtained better results with it than with lactic acid milk we had repeated outbreaks of scurvy when the management of the institution failed to provide sufficient orange juice or tomato It is absolutely essential that infants receiving malt soup should have orange juice or tomato in considerable quantities

Fate of Subcutaneously Injected Red Blood Cells

DR ROOD TAYLOR Minneapolis Using Ashby's method of differential red blood cell counting I determined that following subcutaneous injection of homologous citrated blood there is no marked absorption of injected corpuscles into the recipient's circulating blood

Calcium-Magnesium-Phosphorus Balance in Children Subject to Convulsive Disorders

DR B RAYMOND HOOBLER Detroit In general it was found that the retention of these minerals was considerably diminished in children subject to convulsive disorders when compared with normal controls The findings indicate that in such children an attempt should be made to discover the mineral deficiency and if such a defi- found in effort should be made to bring it up

Current Medical Literature

AMERICAN

Titles marked with an asterisk ( ) are abstracted below

American Journal of Diseases of Children, Chicago

June 1920, 19, No 6

*Effect of Intravenous Injections of Calcium in Tetany and Influence of Cod Liver Oil and Phosphorus in Retention of Calcium in Blood A Brown I F MacLachlan and R Simpson Toronto
Nitrogenous and Sugar Content of Blood of New Born J P Sedgwick and M R Ziegler Minneapolis —p 429
*Allergy in Infants and Children O M Schloss, New York —p 433
*Fordyce's Disease as Pseudo Koplik Spots Cause of Mistakes in Diagnosis of Measles J C Regan Brooklyn —p 455
*Bacillus of Pfeiffer in Inflammations of Respiratory Tract in Children M Wollstein and R C Spence New York —p 459
Bullous Eruption Complicating Measles F C Neff, Kansas City Mo —p 469
Hemorrhage into Spinal Cord at Birth C W Burr, Philadelphia —p 473
Von Pirquet's Feeding System H K Faber San Francisco —p 478

Calcium Lactate in Tetany—Constitutional reactions were produced following intravenous injection of calcium lactate in 1.25 gm doses in nine patients observed by Byfield and his associates The degree of reaction varied from a slight drowsiness to almost complete collapse accompanied by dyspnea The signs of reaction disappeared usually between one and seven hours, the more severe the reaction the longer it took the patient to recover A temporary absence of both electrical and mechanical signs of tetany usually lasting from seven to ten hours was noted Apparently no beneficial therapeutic effect was exerted, unless this was supplemented by the administration of cod liver oil and phosphorus, and in this instance the reduction of the tetanoid symptoms is a little more rapid than with the employment of cod liver oil and phosphorus alone Cod liver oil and phosphorus produced an increase in the blood calcium with a corresponding reduction in the mechanical and electrical signs, within a period of from ten to seventeen days

Allergy—Twelve patients who were desensitized for from three to seven years were followed by Schloss All of these patients are now quite immune and can eat, without discomfort, the foods to which they were sensitive The results of this study are described in detail

Fordyce's Disease—This is one of the conditions of the mouth which may simulate Koplik's spots when they exist in patients who develop German measles The similarity between the clinical symptoms of the two diseases is further increased by the presence of these pseudo-Koplik spots Fordyce's disease is quite frequently mistaken for early Koplik spots in patients ill with various contagious diseases and exposed to measles, whose buccal mucosa is being examined daily for the appearance of the true spots The possibility of these pseudo-Koplik spots leading to errors in diagnosis when they are present in patients with suspicious looking maculopapular eruptions from serum or antitoxin, should be borne in mind

Incidence of Bacillus of Pfeiffer—Among 1,000 patients examined by Wollstein and Spence for the presence of the bacillus of Pfeiffer in the sputum the organism was found in 474 The bacillus of Pfeiffer was present in the sputum of 74 per cent of all the pneumonia cases studied Eighty-five per cent of all the cases with rhinitis and bronchitis severe enough to produce systemic reactions were positive for that organism Fifty-three per cent of the ordinary colds showed the bacillus, but only 11 per cent controls carried it It would seem, then, that this bacillus is not a normal inhabitant of the normal respiratory tract, but that at the time when an epidemic of influenza prevails, it is present in over 50 per cent of all cases of inflammations of any portion of the respiratory tract

American Journal of Public Health, Boston

May 1920 10, No 5

Relative Functions of State and Local Health Departments C E McCombs New York —p 393
Reduction of Deaths from Infantile Diarrhea by Care of Bowel Discharges of Infants E C Levy Richmond Va —p 400
By Products from Sewage Sludge R S Weston Boston —p 405
Need for Standards for Recording and Classifying Defects and Impairments J S Billings New York —p 410
Meat Inspection Law for Municipalities W P Jones Washington D C —p 415
Federal Meat Inspection as a Safeguard to Public Health J R Mohler, Washington D C —p 421
Diphtheria Virulence Test in Public Health Work E M Wade and C E Vaughan Minneapolis —p 426
Epidemiologic Points Regarding Acute Respiratory Diseases Patch ogue New York —p 431

Archives of Dermatology and Syphilology, Chicago

June 1920 1, No 6

Precancerous Lesions of Skin of Vulva Leukoplakic Vulvitis Kraurosis Pruritis F J Taussig St Louis —p 621
*Hydrargyrism from Application of Weak Ammoniated Mercury Ointment in Treatment of Psoriasis P E Bechet New York —p 636
*Spirochetes Derived from Red Blood Corpuscles F Eberson St Louis —p 638
*Etiology of Eczema H H Hazen Washington, D C —p 642
Skin Reactions to Apothesin and Quinin in Susceptible Persons W H Mook St Louis —p 651
*Two Unusual Phases of Hepatic Syphilis U J Wile Ann Arbor —p 656
Physics of Roentgen Ray J S Shearer Ithaca N Y —p 664

Precancerous Lesions of Vulva—An accurate study of the vulva in 100 women beyond the menopause was made by Taussig The average age of these women was 67 years All variations of vulvar atrophy were encountered They were independent either of age, or the amount of atrophy in other parts of the skin or of the amount of vaginal discharge. The extreme forms of atrophy were more common in those women who had had children Cases of extreme atrophy presented at times a markedly dry and brittle skin that cracked open on merely separating the labia for inspection In spite of frequent lack of cleanliness, pruritis was only rarely present The special pathologic conditions encountered were pruritis vulvae, kraurosis vulvae, leukoplakic vulvitis and carcinoma vulvae It was apparent that the cessation of ovarian secretion, either by castration or at the menopause, leads to profound atrophic changes in the vulvar skin which, under special conditions, predispose to carcinoma In all instances there is a general atrophy which varies greatly in the typical cancer following leukoplakic vulvitis There is a combination of three factors cessation of ovarian function, disappearance of elastic tissue from the underlying dermis, and chronic inflammation These are with reasonable certainty of special significance in the etiology of the malignant degeneration

Hydrargyrism.—In Bechet's case only 1 dram of ointment of ammoniated mercury was contained in 1 ounce of salve, or approximately 1.25 per cent ammoniated mercury, and yet mercurial ptyalism resulted

Spirochetes in Red Blood Corpuscles—The spirochete-like bodies derived from red blood corpuscles by Eberson bear no relationship whatever to the organism of syphilis and may be produced at will

Etiology of Eczema—As clinical entities now well established the following are suggested by Hazen dermatitis due to external irritation, vagotonic dermatitis, urticarial dermatitis and dermatitis due to disturbed food assimilation (the eczema of young children) None of these conditions should, he says, be classified as eczema, as this only results in confusion and a failure to discover the cause

Syphilis of Liver—The two phases of liver syphilis described by Wile are "icterus gravis syphiliticus" also known as 'icterus syphiliticus praecox' and syphilitic cirrhosis

Archives of Internal Medicine, Chicago

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*Sodium Carbonate in Chloroform Poisoning E A Graham St Louis —p 575
*Study of Multiple Cartilaginous Exostosis J A Honeij New Haven Conn —p 584
*Toxic Jaundice in Patients Under Antisyphilitic Treatment C V Bailey and A Mackay Woodstock, Ont, Canada —p 628
*Case of Hereditary Diabetes F M Allen and J W Mitchell Lakewood N J —p 650
*Prevention of Simple Goiter in Man D Marine and O P Kimball Cleveland —p 661
T Wave of Electrocardiogram of Dog Following Ligation of Coronary Arteries F M Smith Chicago—p 573

Sequence and Arrangement of Pallor and Redness in Irritated Skin of Normal and Dermographic Individuals L B Bibb Little Rock Ark —p 680
Determination of Ventricular Predominance from Electrocardiogram H E B Pardee New York —p 683
*Effect of Acute Yellow Atrophy on Metabolism and Composition of Liver W C Stadie and D D Van Slyke New York —p 693

Sodium Carbonate in Chloroform Poisoning—Graham's study shows that dogs may be protected to a variable extent from the effects of late chloroform poisoning by the administration of sodium carbonate

Multiple Cartilaginous Exostosis.—A detailed analysis and classification of sixty-six reported cases made by Honeij showed that a positive history of heredity was obtained in thirteen of thirty-three cases, the disease having occurred in some members of the patients' families In one case, eight members were affected, and in several other cases many members were similarly affected Honeij reports four cases in detail with the study of the calcium and magnesium of two of the patients

Syphilis—The results of a study of the chemical analyses of the blood and urine and the effect of exercise and diet in the treatment of syphilis are given by Bailey and MacKay

Hereditary Diabetes—One of the patients in the diabetic service, with which Allen and Mitchell were connected, came of a family in which seven out of fourteen children of one father (one by one woman, thirteen by another woman) were diabetic In addition to the treatment, clinical and pathologic studies were carried out in the attempt to throw light on the hereditary feature of the condition Clinical examinations of the patient and his family for general or focal infections, including clinical and serological examinations for syphilis, were negative Glucose tolerance tests afforded an early diagnosis in one of the seven cases of diabetes, but were negative in the mother and the remaining children The gross and microscopic pathologic findings of the tissues of the patient who died served further to exclude syphilis, and were characteristic of tuberculosis The pancreas showed changes of two types, namely, occasional hydropic degeneration of islands (functional overstrain) and slight fibrosis and hyalin formation in islands (infectious or toxic damage) In general, the diabetic heredity, which apparently came through the father, was manifest in the children who most resembled him in coloring of complexion, eyes and hair, but the rule was not absolute As far as glucose tolerance tests could decide, the diabetic tendency was inherited as a unit character

Prevention of Goiter—Observations on the prevention of simple goiter in man on a large scale, made by Marine and Kimball, have extended over a period of thirty months The results show that it may be prevented very simply and cheaply in normal individuals While thyroid enlargements of adolescence are more common, they are not more important than those occurring in mother and fetus Prevention of adolescent goiter is properly a public health problem, while the prevention of fetal and maternal thyroid enlargements is largely a responsibility of individual physicians

Blood and Urine Analyses in Acute Yellow Atrophy—Stadie and Van Slyke report chemical analyses of the blood and urine made in a case of acute yellow atrophy for three days before death, together with analysis of the liver removed at necropsy three hours after death The study was directed especially toward the nitrogen metabolism and the acid-base balance of the patient An increased excretion of ammonia and titratable acids was observed in the last days of illness, and a fall of plasma bicarbonate to slightly below normal on the day before death Even at this time, however, the deviations from the normal were too small to indicate that acid intoxication was a significant factor in the condition The results afford confirmation of a quantitative character for the belief that amino acids are formed by autolysis in the atrophying liver, and circulate and are excreted as such in unusual amounts The excretion of amino acids did not appear to be due to increase in their rate of formation for the total protein katabolism was not abnormally or even unusually rapid The excretion appeared due rather to loss of power to deaminize amino-acids at even an ordinary rate These observations support the view that in the deamination of amino-acids and the synthesis of urea the liver bears a part which cannot be entirely assumed by the rest of the body

Archives of Ophthalmology, New York

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Ocular Manifestations following Exposure to Various Types of Poisonous Gases G S Derby Boston —p 119
New Operation Involving New Principle in Etiology and Treatment of Chronic Primary Glaucoma E J Curran —p 131
Therapeutic Use of Radium in Diseases of Eye H H Janeway New York —p 156
Case of Trigeminal Neuralgia C W Stevens New York —p 175
New Apparatus for Testing Accommodation H J Howard Long Island N Y —p 182
Pupillary Symptoms in Case of Embolus of Central Artery of Retina Especial Reference to Primary Reflex J Dunn Richmond Va —p 191
Maddox Multiple Red Some of Its Optical Defects P Dolman Long Island N Y —p 194
Removal of Magnetic Foreign Bodies from Vitreous L M Francis Buffalo —p 198
Diagnosis and Treatment of Syphilitic Involvement of Optic Pathways M J Schoenberg New York.—p 204
Tonometric Chart T H Butler Birmingham England —p 227

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Principles of Posture M E Todd Boston —p 645
Bodily Mechanics and Medicine L T Brown Boston —p 649
Malnourished Child in Public School W R P Emerson Boston —p 655
Comparative Statistics on Physical Examinations of Pupils of Boston Public Schools W H Devine Boston —p 658
*Rupture of Rectus Abdominis Muscle R J Behan Pittsburgh —p 660

Rupture of Rectus Abdominis Muscle—While raising a heavy window Behan's patient suddenly felt a sharp pain in the right side The pain would cease while lying quietly, but would return when she raised up, coughed or sneezed No other symptoms were manifested, except tenderness on pressure over the lower half of the rectus which was in tonic contraction In the center of this rigid area there seemed to be a slight groove where the fingers could be pressed down deeply through the rectus muscle On coughing there was a slight bulging of this area Operation confirmed the diagnosis of ruptured rectus abdominis The separation had apparently occurred down near the insertion of the rectus muscle into the tendinous portion adjacent to Poupart's ligament

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*Epidemiology and Etiology of Influenza A J McLaughlin Washington D C —p 1
*Pneumonia in Woman with Habitual High Blood Pressure M J Konikow Boston —p 23

Influenza—McLaughlin presents an historical review of influenza and analyzes recorded data as to its epidemiology and etiology problems which remain unsolved He is convinced that more intensive comprehensive and sustained laboratory research must be made using the body fluids and secretions of influenza cases for material to solve the problem and secure the biologic aids now lacking for the prophylaxis and treatment of influenza

Pneumonia Lowers High Blood Pressure—A woman aged 54 had an habitual high systolic blood pressure never less than 225 and at times as high as 275 She contracted pneumonia On the third day of the pneumonia the blood pressure fell to 160 and continued to fall until it reached as low as 130 when lysis began and the dullness reached its height From this date with the gradual fall of the temperature of the pulse and of the respiration the blood pressure began to climb again the diastolic slowly the systolic quite rapidly, until after three weeks it reached 230 almost her habitual pressure Konikow interprets this case to mean that high blood pressures should be left alone if the cause of it cannot be ascertained and removed High blood pressure in itself is merely nature's means of self-defense

Journal of General Physiology, Baltimore

May 20 1920 **2** No 5

Effect of Temperature on Facet Number in Bar Eyed Mutant of Drosophila II J Krafka Urbana, Ill—p 433
Effect of Temperature on Facet Number in Bar Eyed Mutant of *Drosophila III* J Krafka Urbana Ill —p 445

Influence of Hydrogen Ion Concentration on Inactivation of Pepsin Solutions J H Northrop New York—p 465
Effect of Concentration of Enzyme on Rate of Digestion of Proteins by Pepsin J H Northrop New York—p 471
Dark Adaptation of Human Eye S Hecht Omaha—p 499
Significance of Cambium in Study of Certain Physiologic Problems I W Bailey, Forest Hills Mass—p 519
Quantitative Study of Effect of Anions on Permeability of Plant Cells O L Raber, Cambridge, Mass—p 535
Antagonistic Action of Anions O L Raber, Cambridge Mass—p 541
Nature of Growth Rate H S Reed, Riverside Calif—p 545
Cause of Influence of Ions on Rate of Diffusion of Water Through Collodion Membranes H J Loeb, New York—p 563
Reversal of Sign of Charge of Membranes by Hydrogen Ions J Loeb New York—p 577

Journal of Industrial Hygiene, Boston

May 1920 2, No 1

Mortality from Respiratory Diseases in Glass Industry F L Hoffman, Newark N J—p 1
Surgery and Increased Production A C Burnham New York—p 6
Modern Specialist in Unrest Place for Psychiatrist in Industry E E Southard—p 11
Social Work and Industrial Hygiene A W Stearns—p 20
Successful Industrial Medical Department M B Franklin Philadelphia—p 22
Industrial Diseases Under Workmen's Compensation Act T M Legge London, England—p 25
Poisons in Rubber Industry Hexamethylene Tetramine N A Shepard and S Krall, Akron Ohio—p 33

Journal of Infectious Diseases, Chicago

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Studies in Influenza and Pneumonia E C Rosenow, Rochester Minn
*V Bacteriology and Certain Clinical Features of Influenza and Influenzal Pneumonia—p 469
*VI Leukocytic Reaction in Influenzal Pneumonia—p 492
*VII Effects Following Injection of Bacteria Found in Influenza in Normal Throats in Simple Nasopharyngitis and in Lobar Pneumonia—p 504
*VIII Etiology of Gastro Intestinal Influenza—p 557
*IX Changes in Green Producing Streptococcus Induced by Successive Animal Passage and Their Significance in Epidemic Influenza—p 567
*X Immunologic Properties of Green Producing Streptococci from Influenza—p 597
*XI Therapeutic Effects of Monovalent Antistreptococcus Serum in Influenza and Influenzal Pneumonia

Influenza and Pneumonia Studies Bacteriology—From a bacteriologic study made by Rosenow of a large series of cases of influenza and influenzal pneumonia throughout four epidemic waves, green-producing streptococci (including pneumococci) were found to occur more constantly and in larger numbers than any other organisms commonly associated with this disease This flora predominated alike in the cases of influenza without lung involvement, in those of lung involvement in the initial febrile attack as well as in those in which influenzal pneumonia developed after a quiescent interval following influenza During the latter part of the outbreaks hemolytic streptococci became relatively more numerous especially late in the disease and death was often the result of invasion by these organisms The influenza bacillus was found in the sputum in the early part of the first wave only in a few cases and always in association with streptococci, while throughout the remaining three waves it was isolated only occasionally

Leukopenia in Influenzal Pneumonia—Leukopenia, or absence of leukocytosis has come to be regarded as an important aid in the diagnosis of influenza, and a persistent leukopenia as of bad prognostic import The cause of the leukopenia has been the subject of much speculation Rosenow's findings indicate that the reduction in leukocytes following injection of the material from patients with influenza may not be due to an unknown virus, but to peculiar properties of the streptococci or other bacteria at hand in this disease These streptococci have the power by growth in vitro and in vivo to produce a soluble filterable substance The filtrates from broth cultures and from influenzal lungs and sputum when applied intratracheally in guinea-pigs have the power, among other properties to cause sharp reduction in leukocytes The reduction in leukocytes has occurred with regularity only in the animals injected with influenza strains and not following injection of streptococci in like dosage from similar conditions showing leukocytosis, or type pneumococci

Infecting Powers of Streptococci—Through a study of the infecting powers of the streptococci in influenza and influenzal pneumonia throughout several epidemic waves, Rosenow has been able to reproduce in animals, by various methods of injection, but particularly by intratracheal injection the picture of influenza as seen in man Likewise, the gross and microscopic changes which have come to be regarded as quite characteristic of influenzal infection have been reproduced

Gastro-Intestinal Influenza—On the basis of the experiments reported Rosenow claims that there is a true gastro-intestinal type of influenza and that green-producing streptococci similar to those isolated from the respiratory type of the disease but which tend to localize in the gastro-intestinal tract are the chief cause All symptoms, however, in influenza referable to the gastro-intestinal tract are not due to localization of bacteria in its mucous membrane The symptoms and findings in influenza are due in part to an anaphylactoid reaction, the severe vomiting and diarrhea noted at the outset of some cases may be an expression of this mechanism

Change in Virulence of Streptococci—The results reported elsewhere following the intratracheal injection into animals of the green-producing streptococcus from influenza have been verified and extended in this study by Rosenow Virulence and mortality increased after one or two injections, then diminished

Value of Monovalent Antistreptococcus Serum in Influenza—Of the twelve patients treated by Rosenow, all but one were critically ill at the time of serum treatment Five recovered and seven died Three of the patients who died were practically moribund at the time of the serum treatment and good effects could scarcely be expected Two others that died showed green-producing streptococci immunologically different from the strain with which the serum was prepared, and in two, hemolytic streptococci caused death In these cases also improvement could not be expected In all cases in which specific agglutination was obtained, marked improvement followed the injection of the serum, and in no case were good effects noted at a time when agglutination tests were negative

Kentucky Medical Journal, Bowling Green

June 1920 18 No 6

Tendency Toward State Medicine W W Anderson Newport—p 185
Roentgenography in Diagnosis of Tuberculosis I H Brown Winchester—p 191
*Selective Treatment of Fibromyoma Uteri J W Price Jr Louisville—p 195
Exhibition of Fetus with Anomalous Placement of Ears H E Tuley Louisville—p 205
Alopecia Areata in a Boy of Twelve W A Jenkins Louisville—p 206
Progressive Muscular Dystrophy Exhibition of Two Brothers R T Pirtle Louisville—p 207
Extremes of Age as Surgical Risks E J Brown Stanford—p 210
Ocular Hygiene R Lockhart Owensboro—p 214
*Treatment of Hypertrichosis W J Young Louisville—p 217
Early Diagnosis in Rectal Diseases B Asman Louisville—p 219
Fecal Fistula W L Gambill Jenkins—p 223

Treatment of Fibromyoma Uteri—Price does not agree with Clark that a small myomatous uterus causing hemorrhage is not a case for the surgeon He believes that if the patient is in a good physical condition operation is a most conservative treatment

Treatment of Hypertrichosis—Young does not favor the use of the roentgen ray, radium or carbon dioxid in the removal of superfluous hair because of the dangers attending their application He prefers electrolysis which produces excellent cosmetic results without discernible scars

Maine Medical Association Journal, Portland

May 1920 10, No 10

Comparative Study of Serum Sickness and Certain Acute Exanthemata L D Bristol Augusta—p 291
Current Misconceptions Regarding State Hospitals C J Hedin Bangor—p 299
Early Tuberculosis O S Pettingill Hebron—p 308

Medical Record, New York

June 26 1920 **97**, No 26

Oliver Wendell Holmes and the Medical Student K M Vogel New York—p 1067
Antituberculosis Movement Prior to and Since Formation of National Tuberculosis Association S A Knopf New York—p 1071
Rheumatic and Some Other Infections S E Earp Indianapolis—p 1074
Localization of Pulmonary Lobes by Roentgen Ray K Dunham Cincinnati—p 1077
*Autoserum Therapy (Intraspinal) In Lethargic Encephalitis I C Brill Portland Ore—p 1079
Prevention of Peritonitis in Case of Intrapartum Infection Subjected to Extraperitoneal Cesarean Section R A Bartholomew Atlanta Ga—p 1080

Autoserum Therapy in Lethargic Encephalitis—Five cases have been treated by Brill by this method In four of these the improvement was definite, rapid and marked In the fifth case, the patient was in a moribund condition with signs of rapidly developing pneumonia when a single injection of autogeous serum was given intraspinally The following day the patient's condition appeared to improve, but on the third day he died of pneumonia The technic consists in obtaining from the patient from 60 to 100 c c of blood A lumbar puncture is performed in the usual manner and from 25 to 35 c c of spinal fluid is withdrawn and an equal amount of patient s blood serum is injected into the subdural space The foot of the bed is raised from 6 to 8 inches for from three to four hours Brill does not consider it necessary to inactivate the serum, since it no doubt destroys some antibodies

Military Surgeon, Washington, D C

May 1920 **46**, No 5

Function of Medical and Surgical Consulting Staffs Determined by Experience of Late War J L Bevans—p 465
Experience with a Gastrointestinal Service in Army Hospital J L Kantor—p 507
Blood Transfusion R G Hussey—p 514
Influenza in U S Army D C Howard and A G Love—p 522
Founding of this Association and its Founder Nicholas Senn H M Brown—p 549
Epidemiology of Influenza M W Hall—p 564
Other Side of Question of Indirect Contact Infection in Acute Respiratory Diseases T W Jackson—p 570

Minnesota Medicine, St. Paul

June, 1920 **3**, No 6

*Diagnosis of Cardiac Disease J S Gilfilan S Paul—p 269
*Radium Roentgen Ray Therapy of Carcinoma Uteri and Uterine Bleeding F S Bissell Minneapolis—p 273
*Tuberculosis of Thyroid A C Broders Rochester—p 279
Uterus at Menopause E X Wanous Minneapolis—p 283
Prolapse of Uterus W A Coventry Duluth—p 286
Vertigo its Causes and their Determination J A Watson Minneapolis—p 290
Injection of Gas into Peritoneal Cavity for Diagnostic and Therapeutic Purposes A F Tyler Omaha—p 295
Blood Transfusion and Results that may be Expected C R Mullong Norfolk Neb—p 298

Diagnosis of Cardiac Disease—Gilfillan would not place too much dependence on a systolic murmur in the diagnosis of a valvular lesion He advises that other evidence should be demanded when a lesion is suspected, and that the murmur should be searched for at different times and under various conditions

Treatment of Cancer of Cervix.—Combined radium and roentgen-ray therapy is considered by Bissell as a treatment of choice in all cases of cancer of the cervix In early cases, conservative surgery followed by radiation is justified but probably the latter alone will prove equally efficient Cases of cancer of the fundus should all be submitted to operation, but the patient should be given the added benefit of postoperative radiation Bissell would accept radiation as a specific in hemorrhages due to myoma or fibrosis or those of unknown etiology

Tuberculosis of Thyroid—Seven cases of this type have been under observation in the Mayo Clinic. They are divided into three groups (1) cases with high degree of hyperthyroidism, (2) with a moderate degree with hyperthyroidism (3) hyperthyroidism mild or absent. In each case the diganosis was made after the enlarged gland had been removed by operation The greater the tuberculous involvement the less severe the toxic symptoms Broders believes that all cases of tuberculosis of the thyroid are secondary to some focus elsewhere in the body, although none were discovered in the seven patients

Missouri State Medical Ass'n Journal, St. Louis

June 1920 **17** No 6

Influence of Medical Profession N P Wood Independence—p 221
Influenza and Influenzal Pneumonia V C Vaughan Ann Arbor Mich—p 223
Lacy Heist Method of Testing Immunity by Means of Whole Coagulable Blood in Vitro S Solis Cohen Philadelphia—p 225
Treatment of Mild Case of Diabetes Mellitus R T Woodyatt Chicago—p 227
Certain Conditions in Europe after War A J Carlson Chicago—p 229
Typhoid Fever in A E F H Emerson New York—p 230
Botulism C L Alsberg Washington D C—p 232
Differences Between Diagnoses of Chloral and Morphin Poisoning H McGuigan Chicago—p 234
American Relief Administration European Children s Fund F C Gephart New York—p 235
*Wandering Spleen Report of Case C Smith St Louis—p 236
Venereal Disease Reporting in Missouri R L Russell Jefferson City—p 238
Preventing Blindness in Missouri F E Woodruff St Louis—p 240
Hygiene in Dispensary Service G Homan St Louis—p 242
Roentgen Rays in Diagnosis of Chest Complications E H Kessler St Louis—p 243

Wandering Spleen—In a case of uterine polyp causing bleeding Smith found on examination, a mass to the right and above the uterus, firm and smooth, and extending as high as the umbilicus The uterus could be distinctly outlined apart from the mass but there seemed to be a close connection between the two structures During examination the tumor would suddenly jump to the left iliac region, causing pain Blood examination was negative A diagnosis of subserous fibroid was made At operation the mass proved to be the spleen attached to the right ovarian region by a fibrous adhesion The pedicle measured 1½ inches in diameter with veins about three-eighths inch in diameter extending from the spleen diagonally across the abdominal cavity to the normal splenic region The spleen was removed Statements made by the patient seemed to justify the diagnosis of malarial spleen One month after the operation, the blood count was virtually normal

Modern Hospital, Chicago

May 1920 **14**, No 5

Carson C Peck Memorial Hospital C F Neergaard Brooklyn—p 341
Purpose and Methods of Air Control in Hospitals E Huntington—p 348
Use of Books in Hospital M H Barker Worcester Mass—p 353
Illinois New State Institutions and Hospitals A L Bowen Springfield Ill—p 357
Prevention of Cross Infections in Children s Ward of a General Hospital J C Doane Philadelphia—p 361
Dental Care for Ward Hospital Patients L A Sexton Hartford Conn—p 364
Development of Hospital Planning in Military Hospitals of Canada W L Symons Canada—p 368
Training Opportunities in Medical Department U S Army H F Pipes M C U S Army—p 383
Full Time Pathologic Interns H J Goeckel Plainfield N J—p 385
Discipline in Schools of Nursing H M Gillette Erie Pa.—p 389
Student Self Government S E Parsons Boston—p 392
Courses of Instruction for Dietitians K Fisher New York—p 395
Teaching of Medical Dietetics L Bauman New York—p 397
The Relation of the Physician to the Dietitian E Campbel Cincinnati—p 396
Work of New York City Division of Industrial Hygiene S D Hubbard New York—p 405
Prisoner and Free Man E H Cleveland Inwood-on the Hudson N Y—p 407
Milestones in the Fields of Rehabilitation D C McMurtrie New York—p 408

New York Medical Journal

June 19 1920 **111** No 25

Retention Crypts in Infraton illar Nodules as Harbors of Pathogenic Bacteria T R French Brooklyn—p 1057
Method of Anesthesia for Adenoid and Tonsil W New York—p 1065
Relation of Hypertension and Hypotension to Deafness and Tinnitus H M H
Treatment of Chronic Purulent Otitis York—p 1072
Mastoidectomy Followed by Insanity
Technic of Simple Mastoid Oper —p 1079

Four Patients with Cysts of Larynx Operated on Under Suspension Laryngoscopy W Freudenthal New York—p 1080
*Case of Injury to Larynx T O Lewis Philadelphia—p 1081
*Cancer of Larynx Removed by Indirect Method M J Ballin New York—p 1082
Voice and Lingual Tonsil P V Winslow New York—p 1083
Some Endoscopic Mishaps A H Arrowsmith Brooklyn—p 1083
Removal of Foreign Body from Bronchus W B Chamberlain, Cleveland—p 1084
*Wire in Esophagus C J Imperatori New York—p 1084
Conservative Nasal Sinus Surgery M S Ittelson, Brooklyn—p 1085

Injury to Larynx—A steel worker was struck in the neck by a small fragment of hot steel. Shortly after the injury he experienced great difficulty in breathing, and had a spasmodic cough and severe pain in the region of the wound. On admission to the hospital the patient presented the cardinal signs of laryngeal stenosis, an anxious expression, husky voice, a well marked cyanosis, recession of the accessory muscles of respiration, and difficulty in swallowing. On examination, there was found a small cut to the left of the median line of the neck, extending through the left wing of the thyroid cartilage, through which a small quantity of air was escaping. There was some emphysema in the tissues of the neck. Indirect examination of his larynx showed the arythenoids were swollen, the left immovable, the vocal cords could not be seen, and the lumen of the larynx was greatly narrowed. By means of the roentgen ray the foreign body was located. The findings being the same as before the wound was again cocainized and by means of the fluoroscope, and a probe between the larynx and esophagus, it was removed.

Cancer of Larynx—The entire clinical picture in Ballin's case gave the impression that it was an ordinary case of subacute laryngitis. Under local treatment there was a gradual improvement in the inflammatory condition, with the exception of a small polypoid elevation about the size of a pea which remained in the anterior portion of the left vocal cord near the anterior commissure. Ballin removed the growth by the indirect method. The pathologic diagnosis was carcinoma. The patient refused to submit to a major operation, and as his throat assumed a more healthy appearance, and his voice almost returned to normal, Ballin advised him to have nothing done for the present. Two and a half years have elapsed, and there has been absolutely no signs of recurrence.

Wire in Esophagus—A patient had been in the habit of swabbing his throat with a heavy copper wire, one end of which was wrapped in cotton. During one of these manipulations the wire was pushed down so far that attempts to get it out were without avail. Esophagoscopy showed the upper end of the wire embedded in the lateral wall of the esophagus at a point about 9 cm. below the cricopharyngeal constriction, that is, about 25 cm. from the upper teeth. Because of fixation of the lower end of the wire, it had to be removed by means of gastrostomy. The patient died thirty-six hours after the operation from pulmonary embolism.

June 26 1920 **111** No 26

Industrial Toxicology W A Wadsworth Philadelphia—p 1101
Health of Worker in Industry C B Connelley Harrisburg Pa—p 1103
Filtered Roentgen Ray Dosage W D Witherbee and J Remer New York—p 1105
Reflex Disturbances Due to Eye Strain H E Smith New York—p 1108
Malnutrition in Infancy and Childhood J D Leebron Philadelphia—p 1109
Tuberculous Veterans J L Mandracchia Brooklyn—p 1112
Problem of Malingerer J C Fisher New York—p 1113
Group Study in Surgery of Head S Oppenheimer New York—p 1117
Coin Test as Aid in Diagnosis of Bronchiectatic Cavity S A Loewenberg Philadelphia—p 1122

New York State Journal of Medicine

May 1920 **20** No 5

Lethargic Encephalitis E L Hunt New York—p 137
Symptomatology of Epidemic Encephalitis M O'nato New York—p 140
Present Status of Poliomyelitis H B Sheffield New York—p 146
Tenotomy of Inferior Oblique Muscle J W White New York—p 156
Nationalization of Agencies for Health Welfare of People A T Lytle Buffalo—p 159

Northwest Medicine, Seattle

May 1920 **10**, No 5

Mathematical Terminology for Neoplasia and Its Significance W C. McCarty Rochester Minn—p 113
Technic of Whole Blood Transfusions Value in Association with Surgical Procedures in Treatment of Pernicious and Other Severe Anemias N M Percy Chicago—p 119
Treatment of Cancer of Breast L P McCalla Boise Idaho—p 124
Surgical Treatment of Intracranial Pressure G A Cathey Portland—p 126
Hospital Standardization from Standpoint of Case Records E F Ziegelman Portland—p 128

Ohio State Medical Journal, Columbus

June 1 1920 **16**, No 6

Surgery of Peripheral Nerves J A Caldwell Cincinnati—p 404
Clinicians and Collections N W Ingalls Cleveland—p 409
Etiology and Treatment of Prolapse of Uterus and Bladder G Mumbach Cincinnati—p 416
Mineral Nutrients and Vitamins in Diet E B Forbes Wooster—p 419
Treatment of Average Case of Weak Feet G N Morrill, Cleveland—p 425
Schenck Beck Improved Tonsil Snare W E Schenck Cincinnati—p 427
Intussusception in Infants Report of Five Cases J W Epstein, Cleveland—p 429
*Case of Sodium Nitrite Poisoning S T Oliver Cincinnati—p 430

Sodium Nitrite Poisoning—Oliver's patient mistook sodium nitrite for table salt and ate six or eight radishes dipped in this salt. The patient was given an intravenous injection of Fischer's solution (500 c c.) and recovered.

Public Health Journal, Toronto

May 1920 **11**, No 5

Recent Advances in Science of Ventilation from Industrial Standpoint C G Nasmith—p 197
Sanitation W H Hattie—p 207
Public Health Information Bearing on Prenatal Subjects R E Wodehouse—p 211
Industrial Hygiene Need of Research in Canada Report of Committee—p 216
Plan for More Effective Federal and State Health Administration T L Hoffman—p 221
Social Background Standards of Child Placing Mrs A D Fisher—p 226

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

May 1920 No 238

Dental Roentgenography S G Scott—p 392
Case of Fractured Sesamoid in Foot Without History of Trauma F Hernaman Johnson—p 395
Two Cases of Schlatter's Disease T S Scales—p 396
Case of Spondylitis Deformans R M Beath London—p 397

British Medical Journal, London

June 5 1920 **1** No 3101

Jejunocolic Fistula Following Gastrojejunostomy C Bolton and W Trotter—p 757
Military Orthopedics R W Sutherland and J M Christie, Edinburgh—p 762
Physiopathic Paralysis of Hand and Its Causation R G Abercrombie—p 764
*Inherited Syphilis F H Haynes London—p 765
Transfusion of Blood in Nephritis J Ramsay, Blackburn—p 766

Inherited Syphilis Cause of Epilepsy—Haynes believes that the large majority of cases of epilepsy occurring in the young are due to syphilis either in the parent or in the grandparent. In fact, he suspects strongly, there is a want of stability about children of syphilitics. Of the wives of men who had syphilis, some seem to be unaffected and live to a good age but a certain number die young. Haynes refers to four or five instances of such women who have died from so-called puerperal fever and several who have suffered from albuminuria, convulsions or iliac thrombosis during or after pregnancy. One woman who had exophthamic goiter was cured by mercury. Other instances of diseases occurring in those known to be affected with syphilis are Dupuytren's contracture, so-called tuberculous glands of the neck, and ulcerative keratitis. Haynes believes that Bright's disease is

Severe Fatal Internal Injuries Without External Signs—Masters reports the case of a man who fell down a mine shaft for a distance of 150 feet He lived for one and a half hours after the injury There were no abrasions or bruises of any kind on the trunk, externally or internally On opening the abdomen three pints of red blood escaped The spleen, four times its normal size, was badly lacerated near the hilum, the splenic vessels were completely torn off, but the spleen was not separated from its normal bed The cardiac end of the stomach was lacerated for 4 inches, and the stomach contents were free in the abdomen There was hemorrhage into the pancreas and great omentum

Medical Journal of Australia, Sydney

May 15 1920 **1**, No 20

Some Surgical Notes T P Dunhill—p 455
*Ferric Chlorid Test for Diacetic Acid in Urine L A I Maxwell—p 458
Cross Fire Radium and Roentgen Ray Therapy for Inoperable Malignant Disease H Lawrence—p 458
Case of Postoperative Tetanus E L Parry—p 460

Ferric Chlorid Test for Diacetic Acid—When testing the urine of a patient who had been taking sodium bicarbonate for gastric hyperacidity, Maxwell noticed a red color with ferric chlorid similar to that obtained with diacetic acid As there was no reason in this particular case to suspect acidosis and as the reaction of the urine was intensely alkaline, it occurred to Maxwell that the sodium bicarbonate might be the cause of the red color with ferric chlorid Repeated tests showed that if sodium bicarbonate were added to normal urine and then ferric chlorid, the urine became a similar red color to that obtained in the presence of diacetic acid In further experiments the urine of the author after ingestion of approximately 6 gm of sodium bicarbonate during a period of twenty-four hours, also gave a red color on the addition of ferric chlorid Presumably the ferric chlorid reacts with the bicarbonate to form ferric hydroxid which dissolves in the excess of ferric chlorid to give the red color, carbon dioxid being evolved during the reaction The more bicarbonate present, the deeper the red color produced In all cases of acidosis which are being treated with alkalies, it is essential to exclude the possibility of sodium bicarbonate being responsible for the development of the red color when ferric chlorid is added to the urine If this precaution be overlooked, the dosage of alkali may be increased in the hope of overcoming an acidosis which in reality does not exist

South African Medical Record, Cape Town

May 22 1920 **18** No 10

Treatment of Syphilis H Gluckman—p 182
Schistosome Infection from South African Snails F G Cawston—p 192

Archives des Maladies du Coeur, etc, Paris

March 1920 **13**, No 3

*Femoral Venous Pulse C Pezzi E Donzelot and J Yacoel—p 97
*Septal Rhythm A Clerc and C Pezzi—p 103
Case of Ventricular Paroxysmal Tachycardia L Gallavardin—p 121
Case of Atrioventricular Paroxysmal Tachycardia L Gallavardin—p 126

Femoral Venous Pulse in Heart Block—This case is reported as the first to be published in which, with complete heart block, the femoral vein showed a pulse of auricular origin Roentgenoscopy confirmed the extra activity of the auricle while congestion in the liver revealed the slight insufficiency of the myocardium permitting this femoral venous pulse

Septal Rhythm.—Clerc and Pezzi apply this term to what others call sinusal or atrioventricular rhythm, and they describe research which has demonstrated that all its varieties can be experimentally induced by electric or toxic stimulation of the cardiac nervous apparatus

Archives Medicales Belges, Liege

January 1920 **73** No 1

Experimental Meningitis from Germs in the Blood Stream L H Weed (Baltimore)—p 1
*Myotonic Sign of Pulmonary Tuberculosis L Dautrebande—p 13
Psychoses Consecutive to Toxi Infections H Hoven—p 25

Myotonic Reaction as Early Sign of Pulmonary Tuberculosis—Dautrebande has been studying the local transverse contraction in the muscle which follows pinching or tapping the margin of the trapezius, pectoralis or biceps, revealing the extreme excitability of the muscle in the segment irritated, under the influence of the toxins of tuberculosis He obtained a positive reaction with one or more of these muscles in all but six of the hundred tested The muscular system must be completely relaxed, and the test must never elicit pain in a region free from pain, and it is well to grease the fingers Sometimes the reaction can be felt with the fingers, when it is not pronounced enough to be visible Halbron calls the reaction *la corde musculaire*, and Dautrebande speaks of it as a muscular wave saying that it is of constant occurrence in active tuberculosis, and throws light on the localization, the extent, and the more or less progressive course of the lesions

Bulletins de la Societé Medicale des Hôpitaux, Paris

April 16 1920 **44**, No 13

*Serotherapy for Hemorrhage Raymond and A Rouquier—p 485
*Pituitary Treatment in Diabetes Insipidus C Flandin and others—p 487
Lethargic Encephalitis F Bosc and others—p 490 and 493
Another Case of Familial and Hereditary Congenital Ophthalmoplegia O Crouzon and P Behague—p 495

Serotherapy of Hemophilic Intestinal Hemorrhage—The young man had been admitted to the hospital for roentgen treatment of mild exophthalmic goiter, when he began to pass blood by the anus In three days he had seven stools of almost pure blood, from 200 to 300 c c a day, and there was a history of frequent and excessive protracted epistaxis He was given two injections of 10 c c of rabbit serum-serique, that is serum from rabbits in a state of anaphylaxis to horse serum There were no further hemorrhages, and sixteen days later the blood coagulated in four minutes and thirty seconds, instead of the ten minute interval before the serotherapy

Pituitary Treatment of Diabetes Insipidus—The woman in the case reported was quite obese but no influence on the obesity was noted from the pituitary treatment although it proved promptly effectual so far as the polydipsia and the polyuria were concerned Nothing could be found otherwise to indicate pathologic conditions in the pituitary body

April 23 1920 **44** No 14

*Cancer Metastasis in Brain O Crouzon and others—p 500
*Tetanus Originating in Uterus De Massary and Lechelle—p 504
*Typhoid Septicemia N Fiessinger—p 506
Influenza of 1920 at Necker Hospital Renon and Mignot—p 509
Lethargic Encephalitis H Claude and others—p 514
*Children Born in Recent Syphilis M Pinard and Lévy Solal—p 516
*Thyroid Treatment of Hemorrhagic Tendency L P Bottaro and J C Mussio Fournier—p 519

Cancer Metastasis in the Brain—One breast had been removed for cancer twenty years before and the other for the same reason eighteen years afterward Then multiple metastases developed in the brain

Tetanus from the Uterus—Nine days after an abortion, tetanus developed but the woman recovered under serotherapy for fifteen days a total of 2 240 c c of the antiserum

Acute Cholecystitis of Typhoid Origin—Fiessinger reports a case in a man of 44 in which, in the course of recurring gallstone colics inflammatory processes in liver and kidneys were explained by discovery of the typhoid bacilli in the blood, but there were never any symptoms of typhoid fever The gallstones subsided into a latent phase, and the man was soon cured otherwise

Healthy Infants Born During Recent Syphilis of Parents.—Pinard and Levy-Solal report two instances of the marriage of a man who had contracted syphilis four or three months before, but had been given vigorous arsphenamin treatment in the interim The bride conceived almost at once, and her blood soon responded positively to tests for syphilis although there were no clinical manifestations Both man and wife were given thorough treatment, and the child was born apparently entirely healthy and has shown no signs

of syphilis to date, up to seven months from birth No portal of entry for the virus could be discovered on the women They bore the arsphenamin treatment perfectly, it has no feticidal action, the writers say, and can be given in proper doses to the pregnant

Thyroid Treatment of Hemorrhagic Tendency —Bottaro and Mussio report from Montevideo a case in which metrorrhagia, epistaxis, hemoptysis and purpura were superposed on symptoms of mild thyroid deficiency slight puffiness of the face, dropping out of the eyebrows, and vasodilator symptoms The patient was a girl of 19 who had borne a child at 14 and had had three induced abortions since Under thyroid treatment the hemorrhagic tendency seemed to subside

April 30 1920 **44** No 15

Mild Typhus at Paris I egry and others —p 524 and 565
*Cumulative Action of Emetin C Mattei —p 531
*Typhoid Septicemia G Guillain and others —p 534
Myasthenic Syndromes in the Gassed P Harvier —p 536
Epidemic Encephalitis P Kahn and others —p 542 546 552 556 557 and 562
Case of Erythrodermia with Lymphadenia Labbe and Langlois —p 569
Case of Rose Spots in Pneumonia Berge and Hufnagel —p 573
Suprarenal Treatment in Progressive Myasthenia P Marie and H Bouttier —p 575

Cumulative Action of Emetin —Mattei found in men taking emetin that it was eliminated in an irregularly intermittent manner, and was retained so long that it accumulated in such amounts as to be actually toxic This retention over prolonged periods was observed when the emetin had been injected by the vein as well as subcutaneously He warns that 1 gm is the maximal safe dose for man, even when this amount has been reached in the course of a month of treatment interrupted by weeks of suspension

Extra-Intestinal Typhoid —The young woman developed what seemed to be acute articular rheumatism and it yielded in the usual way to the salicylates in less than a week but typhoid bacilli were cultivated from the blood The disease was thus a typhoid septicemia affecting the joints apparently exclusively

Encephale, Paris

May 10 1920 **15** No 5

Catatonia in General Paresis A Antheaume and L Trepsat —p 297
Nerve Lesions in Tay Sachs Disease M Dide and others —p 303
Auditory Verbal Hallucinations P Quercy —p 311
Case of Paranoia with Hallucinations E Gelma —p 318 Concn

Journal de Radiologie, Paris

March 1920 **4** No 3

Radiologic Study of the Aorta Delherm and Thoyer Rozat —p 97
Radiologic Study of Subphrenic Abscess Chas ard and Morenas —p 107
Diaphragmatic Hernia Three Cases Carriere and Desplats —p 112
Gynecologic Radiotherapy in Germany 1914 1918 I Solomon —p 123
Lesions in the Bones in Tuberculous Suspects Billet —p 132
Radio copic Index of Development of the Ventricle in the Depths R Grangerard —p 133

Journal d'Urologie, Paris

February 1920 **9** No 2

*Hypercholesterinemia in Chronic Nephritis Cordier Boulud and Colrat —p 81
*Epithelioma of the Bladder E Jeanbrau and others —p 89
*Nephrotomy in Anuria from Eclampsia M Gerard —p 97
Calculi in the Ureter Child and Two Adults Recovery After Operation Giuliani and Arcelin —p 113

Hypercholesterinemia in Chronic Nephritis —In the case described by Cordier and his co-workers, the farmer of 33 had incipient chronic nephritis with a large heart and high blood pressure, with polyuria albuminuria edema of the legs and impaired vision but only 0 6 per thousand urea in the blood, and the fundus of the eye was normal The complexion was of a jaundice type but more orange than yellow and there was no excess of bile pigments to be detected but the cholesterin content of the blood was high The man was kept in complete repose and allowed only milk and large amounts of green vegetables with revulsion etc In a month the cholesterin content had dropped from 6 4 to 3 2 per thousand and the blood pressure at the same time had declined to 180/100 The subjective improvement kept pace with these findings and clinical health was regained for an active life The patient was *un rasculaire* and not yet *un renal* Excessive functioning of the suprarenals was evidently responsible for the exaggerated production of cholesterin

Epithelioma of the Bladder —The epithelioma in the woman of 62 had developed on an old papilloma which had been noted for twenty-eight years before the four years of the malignant tumor The structure resembled both syncytium and sarcoma

Nephrotomy in Anuria with Eclampsia —Gerard has been able to find only four cases on record in which nephrotomy was done to relieve anuria in eclampsia with recovery of two of the patients He adds another successful case to the list Spontaneous delivery occurred thirty hours after the first convulsion but this did not arrest the eclampsia The most prominent symptom was the anuria with its train of incessant diarrhea, dropsy and mental confusion The kidney began to function anew the evening of the operation but only the kidney that had been incised The other kidney *did not begin to work properly until forty eight hours later* The profuse diarrhea had substituted to some extent the lacking renal function It is possible that there may have been preceding retention of salt and water which may have contributed to the development of the eclampsia the progressive anasarca seems to sustain this assumption He compares with this case the literature on decapsulation in eclampsia Albrecht has compiled 62 cases with 40 per cent mortality Lance 78 cases mortality 28 2 per cent Poten 98 cases mortality 38 8 per cent In the 7 cases of eclampsia with anuria decapsulation had a mortality of 57 per cent For these and other reasons he advocates nephrotomy with a long incision and drainage of the pelvis under nitrous oxid, without waiting until the patient is moribund

Medecine, Paris

May 1920 **1** No 8 Tuberculosis Number

*Present Conception of Tuberculosis L Renon —p 453
*Value of Tuberculin Reactions A Calmette —p 461
Work of the American Commission for the Prevention of Tuberculosis in France Gunn —p 463
Pulmonary Tuberculosis in the Gassed E Sergent and J Haas —p 466
*Tuberculosis and Marriage C Sabourin —p 472
*Pleural Pneumoserosa P E Weil —p 477
Conditions for Artificial Pneumothorax F Dumarest —p 482
Discordance Between Roentgenologic and Stethoscope Findings in Incipient Tuberculosis A Zimmern —p 487
*Antituberculosis Serotherapy A Cavasse —p 490
*The Fixation Reaction in Tuberculosis L Renon —p 496
Compulsory Notification of Tuberculosis L Renon —p 498
*How To Tell When Tuberculosis is Cured L Renon —p 502
*Spiroscopy in Respiratory Disease J Lecher —p 504
*Albumin in Sputum M Salomon —p 508

The Present Conception of Tuberculosis —Renon cites recent research by Madelaine which demonstrated that the tubercle bacilli are not digested by the phagocyte like other bacteria the phagocytes incorporating them die but the micro-organism is left intact The tubercle bacilli may be promptly phagocyted and have lost their acid staining property but eight hours later inoculated in guinea pigs they cause fatal infection A latent infection entails considerable resisting power against a new infection But if the new infection is intense and the bacilli very virulent then the superposed infection induces a rapid necrotic process with expulsion of large amounts of bacilli causing new foci from the swallowed and inhaled bacilli and scattering the infection to others He explains how this combination of immunity and hypersensitiveness is the guide to prophylaxis and describes what is being done in France

Value of the Tuberculin Reactions —Calmette state that at least 95 per cent of adults in the large towns of France give a positive response to the skin and intradermal tuberculin tests But in young children and especially in infants they warn of recent tuberculous infection

Marriage of the Tuberculous —Sabourin says that he and many other physicians know of women with chronic tuberculosis who yet have passed safely through several pregnancies They are usually of a dry muscular nervous type and they have come unscathed through several acute pleurisies as they have a good organic balance and are able to stand strains without their being reflected in the lungs After the

stress of childbirth, he says, it is important to ward off menstruation for a time, and hence he advises lactation, letting the woman nurse her babe to the end, possibly with a little supplementary feeding for the infant By thus warding off the return of the menses, the organic balance has time to get reestablished, and this practice has always proved successful in his experience The tuberculous women who have their lung disease transformed into acute phthisis by parturition are those with comparatively recently acquired infection, and the lesions have kept subactive, who are ultrasensitive to all overexertion and internal intoxications, menstrual and others, with an unstable organic balance, to say nothing of those with impaired heart, kidneys or liver Women of this type should not be allowed to become pregnant

Injection of Air in Pleurisy—Weil emphasizes the importance of this after evacuation of the effusion not only for the diagnosis but in treatment of all forms of pleurisy It often aids in the care of the purulent form, facilitating surgical measures

Serotherapy in Tuberculosis—Cavasse declares that this is not a promise but a reality now Applied in time, serotherapy is the supreme resource in certain forms of pulmonary tuberculosis, especially with hemoptysis as the antiserum is more effectual than normal serum in these cases Serotherapy is also particularly indicated with tuberculous peritonitis and pleurisy, especially in children He advises against serotherapy for the aged, the asthmatic, the nephritic, and with tuberculous laryngitis It is almost certain to fail when the tuberculous organism is unable to respond to tuberculin or when the fever keeps at an even height with scarcely any ups and downs The antiserum made by A Jousset's technic, is injected subcutaneously, about 2 c c per kilogram of weight With extensive lesions, the dose is smaller from fear of inducing too severe a focal reaction A single injection may suffice, but three or four is the usual rule, never over twelve The intervals are eight days at least The temperature is such a reliable criterion that if it does not show marked modification after two injections, Jousset abandons the treatment

Deviation of Complement Test for Tuberculosis—Renon insists that the reaction of fixation should be included as a routine procedure among the biologic tests for tuberculosis The findings are negative when the tuberculous lesion has healed

How to Tell When Tuberculosis Is Cured—Renon decides this by the reaction to the progressive resumption of active life This test of *adaptation progressive a l'activité* is best made in the late summer and fall, thus training the patient to stand the winter

Spiroscopy—THE JOURNAL has described Pescher's device for measuring the capacity of the lungs by blowing into a jar, watching the displacement of the water in the jar He relates here that experience is confirming more and more the advantages of this method of training the lungs to greater expansion

Albumin in the Sputum.—Salomon regards the test for albumin in the sputum as very important for detection of incipient tuberculosis Negative findings, he says positively exclude tuberculosis, and the amount of albumin is a gage of severity of the tuberculous process The albumin can be precipitated out by heat after getting rid of the mucin with a little acetic acid and filtering, or with potassium ferrocyanid and heat, or with nitric acid alone

Presse Medicale, Paris

May 26 1920 **28**, No 34

Thymus Death A Pulawski—p 333
Action of Quinin on the Heart C Pezzi and A Clerc—p 334

Thymus Death—Pulawski relates that a young epileptic man was found dead in the bath tub face downward but the assumption of drowning during an epileptic seizure was not confirmed by the necropsy findings The thymus, however was exceptionally large for his age and other findings completed the clinical picture of the thymic-lymphatic constitution Pulawski reviews considerable literature on sudden death for which the thymus is responsible, and cites Bartels' figures that status thymicolymphaticus was pronounced in 36 per cent of 126 suicide cadavers, and the lymphatic type in 26 per cent Gluzinski has reported cases of thymus death in pseudoparalytic myasthenia, and others have commented on the frequency of the thymic-lymphatic status in persons with exophthalmic goiter

May 29 1920 **28** No 35

*Organotherapy for Children F Apert—p 341

Organotherapy for Children—Apert remarks that except for thyroid treatment in myxedema, very little use is made of organ extracts in pediatrics and yet this is a particularly fertile field for them The children's clinics, fetal findings and the results of experimental research all confirm that the suprarenal cortex, like the thyroid, stimulates the nutritional processes But with thyroid excessive stimulation there is emotionalism and a tendency to lose weight, while with suprarenal cortex excessive stimulation the tendency is to obesity and virilism He advises to begin organ extract treatment with small doses for three days each week, watching the pulse, the weight and the excitability With uniform backward growth, he has obtained the best results with a combination of thyroid and suprarenal powder, especially in the thin anemic and frail If the sexual development is precocious he associates pituitary with the other extracts, with or without suspension of the suprarenal extract In mongolism or depressed vitality from any cause this associated organotherapy often whips up the sluggish development and renders the children easier to teach He insists that administration by the mouth is as effectual as by subcutaneous injection The powder can be given with a mouthful of food Calcium seems to promote the action of thyroid extract, and magnesium that of the suprarenal extract The indications for pituitary treatment will be found among the short and stout hairy subjects with precocious puberty, for suprarenal treatment among the overtall, weak and apathetic, and, among boys in those with a tendency to feminine characteristics, for thyroid treatment among those with uniform backward growth gait, speech and intelligence and delayed development of the sexual organs

Progres Medical, Paris

April 24 1920 **35** No 17

*Sarcoma of Clavicle A Aimes and A Delord—p 181
*Vessel Grafting P Mauclaire—p 185
Sodium Citrate G Faroy—p 187
Exophthalmic Goiter of Emotional Origin in Syphilitic C Pfeiffer—p 187

May 1 1920 **35** No 18

Congenital Hemi Atrophy of the Diaphragm V Cordier—p 193
Hallucinations Laignel Lavastine—p 194
Indications with Deranged Metabolism for Mineral Waters H Paillard—p 196
Sodium Bicarbonate G Faroy—p 197
Plague in History The Avignon Epidemic P Raymond—p 198

Sarcoma of the Clavicle—Aimes and Delord found records of ninety-eight sarcomas among the 126 cases of tumors in the clavicle which they have compiled Pain is sometimes the first symptom exaggerated by movements and cold, and relieved by repose so that it is usually ascribed to rheumatism But an insidious onset without pain is more common With operative treatment long survival is possible, but it is necessary to seek for metastases with extreme care In case of doubt, it is better to remove a secondary tumor than to let a primary sarcoma go untreated With sarcoma, the entire clavicle has to be removed Syphilitic lesions in the clavicle are painful with nocturnal exacerbations Exostoses generally develop at the end of the bone and accompanied by exostoses elsewhere Sarcomatous degeneration of callus in the clavicle is known In a personal case described, the boy of 11 can use his arm normally and there has been no sign of recurrence during the three years since the clavicle was removed

Vessel Grafting—Mauclaire gives a summary review of the success that has been realized with implants of arteries and veins to reconstruct vessels and to restore musculomembranous passages or as a sheath to protect a nerve

Revue Médicale de la Suisse Romande, Geneva

May 1920 **40**, No 5

Lethargic Encephalitis A Cramer and others—pp 277 283 286 293 297 299 301
*Epidemic Hiccup P Gautier—p 290
Seashore Sanatorium in Treatment of Tuberculosis A d'Espine—p 303
*Arsphenamin in Sciatica Veyrassat—p 308
High Frequency Current with Endoscopy for Bladder Tumors Six Cases C Perrier—p 313
Stenosis of Esophagus from Anomaly of Subclavian Artery G G Moppert and J Baumgartner—p 318

Epidemic Hiccup—Gautier relates that at Geneva recently he encountered five cases of intense spasmodic hiccup coming on suddenly persisting for from two to four days and then disappearing with equal suddenness without the treatment having much effect The patients were four men of 30 to 45 and one woman of 46 The lumbar puncture fluid was found practically normal in the one case examined Similar epidemics of hiccup have been reported from Paris and from Berlin recently, and some regard them as an attenuated form of lethargic encephalitis

Arsphenamin in Sciatica—Veyrassat gave arsphenamin by the vein as a last resort in a case of severe sciatica and the prompt benefit encouraged him to try this treatment in four other cases in which compression of the nerve could be excluded In one of the cases the cure was explained by the suspicion of syphilis, in two others tuberculosis was evidently responsible He asserts positively that arsphenamin has an unmistakable action on tuberculous adenitis, but this cannot be the explanation of the benefit in these cases as the sciatica subsided in two days before any swollen glands had had time to be influenced Whatever the explanation, the fact remains that rebellious sciatica subsided after a single injection of 15 cg of neo-arsphenamin in the case of one man of 40 with a family history of tuberculosis In the other cases one or two injections answered the purpose

Policlinico, Rome

May 10 1920 **27** No 19

*Hydrocephalus from Anomalies in Arteries F Pedrazzini—p 523
Induced Pneumothorax After Hematoma P Bertoli—p 531

Anomalies of Arteries as Factor in Hydrocephalus—Pedrazzini gives fifteen photographs of the anomalous course of the arteries in the skull of four infants with primary hydrocephalus The small arteries showed a remarkably tortuous course, with abrupt turns and spirals and irregular caliber These abnormal conditions presented an obstacle to the blood stream, and the balance was thus upset between the production of the cerebrospinal fluid and its absorption The ependyma was rough and thick in parts

March 1920 **27** Surgical Section No 3

Annular Pancreas U Benedetti—p 81
Gunshot Wounds of the Bladder L Frassi—p 84 Concln
Submucosa Lipoma Obstructing the Cecum L Longo—p 105

March-April 1920 **27** Medical Section No 3-4

*Lethargic Encephalitis G Economo—p 93

Lethargic Encephalitis—The whole of this double number, with its 55 pages is devoted to this article by Economo, with twenty plates of photomicrograph findings in thirteen cases of epidemic encephalitis

Rivista Critica di Clinica Medica, Florence

March 15 1920 **21** No 6

Echinococcus Disease of Liver and Peritoneum with Pseudochylous Ascites F Schupfer—p 85 Concln

March 25 1920 **21** No 9

Case of Erb-Goldflam's Disease C Capezzuoli—p 97 Concld in No 10—p 109
Unreliability of Diazo Reaction in Sputum E Bufalini—p 101

Cronica Medica, Lima

April 1920 **37**, No 682

Gunshot Wounds of Pleura and Lung F Quesada—p 117
*Test for Blood in Urine M A Velasquez—p 121
Headache in Schoolchildren F Valles Vargas—p 122
Symptoms from Retention of Chlorid M Aria Schreiber—p 132
Scientific Care of the Insane H F Delgado—p 135

Test for Blood in Urine—Velasquez relates that he has simplified the dimethylamido-antipyrin test for blood in urine He takes up on a scrap of cotton a few drops of the urine from the bottom of the receptacle On this are dropped exactly two drops of a 50 per cent solution of acetic acid and two or three drops of a 5 per cent solution of the dimethylamido antipyrin (pyramidon), and finally, one or two drops of ordinary hydrogen dioxid With a positive response the cotton turns a bluish violet color for about fifteen minutes and then the tint disappears

Archiv fur Verdauungs-Krankheiten, Berlin

March-June 1920 **26** No 3-4

*Paratyphoid Gastro-Enterocolitis B Stein—p 155
*Rumination in Infancy Eva Somersalo—p 167
*Secondary Acute Pancreatitis H Wildberger—p 192
*Catarrhal Jaundice W Buchbinder—p 231
*General Dilatation of the Esophagus A Huber—p 250

Paratyphoid Gastro-Enterocolitis—Stein describes the clinical picture rectoscopic findings and the complicating peritonitis in the acute and chronic form of paratyphoid B disease The characteristic picture in the rectum is extreme hyperemia and swelling of the follicles with serous infiltration of the tissues catarrhal rather than resembling typhoid In his two chronic cases there was an ulcerative colitis He does not know of any literature on chronic paratyphoid infection of the digestive tract except Schottmuller's case A seropurulent enterocolitis seems to be the bridge between the acute and the chronic form

Rumination in Infants—Somersalo has found records of 32 cases of rumination in infancy and describes in detail 2 cases personally observed It usually lasts in infants about five months but may persist up to eight months, one was cured by a change from fluid food to a thick gruel form Diversion of the child's attention proved an important factor in the cure as a psychic factor is unmistakable Alkaline kefir conquered the rumination in one case and complete change of scene in another Several infants were cured when transferred from an institution to a private home confirming Landau's remark that 'rumination is a cage disease' The literature on the subject and on conditional reflexes in general is reviewed including Strauch's article in THE JOURNAL, Aug 21 1915 p 678

Secondary Acute Pancreatitis—Wildberger compares a case personally observed with a number on record in which acute suppurative pancreatitis developed from a perforating gastric ulcer Also a case of acute phlegmonous pancreatitis from involvement in an infectious process starting in the common bile duct In two cases of pernicious anemia the pancreas was found apparently normal at necropsy but in a third case the pancreas showed signs of two waves of acute pancreatitis No cause for the pernicious anemia could be discovered in this case and he compares it with the literature on the causation of pernicious anemia He has found four cases on record in which changes were found in the pancreas during mercuric chlorid poisoning, and reports two cases of this mercurial pancreatitis, but the islands of Langerhans were intact

Catarrhal Jaundice—Buchbinder's experience with 300 cases confirmed that the course is from three to four weeks the cause some inflammation in the liver of toxic origin entailing some modification in the composition of the bile The liver is always large and tender in the first week and the most effectual treatment of catarrhal jaundice is the application of moist heat to the liver region The spleen is also large and soft but not painful and soon subsides to normal The kidneys also show signs of inflammation and there may be considerable sediment in the urine but we should not be too hasty with the diagnosis of nephritis In every case of catarrhal jaundice there is latent insufficiency of the stomach glands Unless the diet is carefully regulated the secretory function may be permanently injured in only eight of the seven cases kept long under observation as the stomach secretion left normal When diarrhea with catarrhal jaundice it can generally be traced to achylia In recurrent

the aim should be to ward off gastro-intestinal complications rather than to check the jaundice

Dilatation of the Esophagus—Huber concludes from analysis of the roentgen findings in his fourteen cases of general dilatation of the esophagus that the main factor is a functional or degenerative impairment of the vagus innervation This causes partial paralysis of the esophagus, and also tends to induce constriction of the cardia Atony of the esophagus is the first phase, and this can be remedied by using a sound to push the food down into the stomach This cures the incipient cases of dilatation and relieves some of the advanced cases, but in others operative measures are indispensable One man with extreme dilatation for twenty-seven years keeps free from disturbances and in good health by eating as usual bread, eggs or chopped meat at each of his three meals Then he pushes down into the stomach all that is left in the esophagus of this food and concludes his meal by pouring through the sound milk cocoa and cream He has improved so much that he now can go three or four days without the aid of the sound

Deutsches Archiv fur klinische Medizin, Leipzig

July 5 1919 **129** No 5 6

*Composition of Blood in Absence of Daylight Grober and O Sempell—p 305
Esophagocardiography W Weitz and I Schall—p 309
*The Heart Beat Volume of Blood G Wiedemann—p 325
*Velocity of Blood Stream with Cardiac Insufficiency F Vorpahl—p 333
*The Venous Pulse with Continuous Arrhythmia A Weber—p 349
The Conception of Disease Clinical Syziology V von Weizsacker—p 359

Composition of the Blood in Absence of Sunlight—Grober and Sempell found no evidences of anemia in twenty-two horses that had been kept in mines for from five to ten years, at a depth of 225 to 637 meters below the surface Most of them had not seen the daylight for over a year some not for ten years The erythrocyte count was somewhat higher than normal, and the hemoglobin a trifle below normal compared with horses elsewhere

Determination of the Volume of Blood Expelled from the Heart at Each Beat—Wiedemann gives an illustrated description of a simple device with which he measures the fluctuations in the pressure in the air passages in the lungs synchronous with the heart beat and from this pneumocardiogram determines the amount of blood expelled from the heart at each beat

Velocity of the Circulation with Cardiac Insufficiency—Vorpahl induced insufficiency in the rabbit heart by injury of the tricuspid valve and then by comparing the oxygen content in the right and left heart he found that retarding the velocity of the blood stream by one fourth or one third entailed pronounced signs of stasis in various organs

The Venous Pulse with Continuous Arrhythmia—Weber concludes from his study of forty-one cases of arrhythmia perpetua that the importance of the auricles for the circulation has never been appreciated enough He discusses the different types of continuous arrhythmia in connection with the venous pulse and the electrocardiogram

Deutsche medizinische Wochenschrift, Berlin

April 22, 1920 **46**, No 17

*Own Blood Infusion A Doderlein—p 449
Acute Atrophy of the Liver F Umber—p 451
*Treatment of Tuberculosis of the Testis H Fis—p 451
Friedmann Treatment for Pulmonary Tuberculosis Zadek—p 453
Diagnostic and Prognostic Significance of Cutaneous Reaction to Bovine Tuberculin I Synwoldt—p 455
Roentgen Ray Treatment of Cancer of Breast Telemann—p 457
*Acute Abscess of the Prostate G Praetorius—p 460
Suggestion for Reconstruction of Anal Sphincter Kurtzahn—p 461
Advantage of Compulsory Notification of Tuberculosis E Neumann—p 463
Venereal Diseases in Relation to Prostitution Struve—p 463
Medical Certificate for Candidates for Matrimony Bruck—p 465
Idem Schubert—p 466
Rhinologic Hints for the Practitioner G Finder—p 466

Reinfusion of Extravasated Blood—When persons were bleeding to death from internal hemorrhage especially from ruptured tubal pregnancy reinfusion of the extravasated blood has been successfully applied, Doderlein relates, in fifty-one cases on record to date, and he has applied it in five cases himself with equal success He obtains the blood by lowering the pelvis so that the blood runs out of a groove in the abdominal wall retractor, pouring directly into a gauze-lined funnel which filters it into an Erlenmeyer jar He introduces a glass tube into the ovarian vein, exposed by the operation the pelvis low, and lets it fill with the blood (citrated) from the funnel Then on raising the pelvis, the blood flows into the vein directly from the funnel The effect is wonderful One who has once seen it will never doubt the wisdom of this "own blood infusion" If there is doubt about the blood being contaminated, it can be injected by the rectum or subcutaneously Of course the procedure is indicated only when there has been a comparatively sudden and extensive loss of blood and the blood is fresh Placenta praevia rupture of the spleen of the liver gunshot wounds of the spleen and of the lungs have been given this treatment with success It not only resuscitates the moribund but aids in the more rapid convalescence, he says, and restores the immune bodies which the system has been accumulating through life

Tuberculosis of the Testis—Els summarizes seven of his own cases and recommends early operation in all cases of tuberculosis of the testis (whether unilateral or bilateral) in which the diagnosis is certain If a typical resection of the epididymis is no longer possible without danger of a recurrence a portion of the testis about the size of a filbert should be reimplanted, in order that the patient though deprived of potestas generandi may preserve libido and potestas coeundi and the accompanying energy and ambition as otherwise the manifestations from loss of testicle functioning are far reaching resulting in indolence loss of energy and general indifference toward one's surroundings He advises the reimplantation in the scrotal sac of the certainly sound parts of the testicle even when the disease process is restricted to one side This saves what is savable and may be of great advantage if the other side becomes pathologic later The implanted testicle in one case described in detail can still be palpated as of the same size and normal movability

Acute Abscess of the Prostate—Praetorius recommends the opening of an acute abscess of the prostate through a median buttonhole incision as the easiest and best form of surgical intervention and in many respects superior to other operative methods He describes also what he regards as the indications for operation in general

Jahrbuch fur Kinderheilkunde, Berlin

February 1920 **91** No 2

*Elements in Food That Promote Growth E Freise—p 79
*Blood Pressure Under Epinephrin E Schiff and B Epstein—p 128
Partial Giant Growth F Uebelin—p 134

Diet Elements that Promote Growth—Freise here reports several years of dietetic experiments with white rats (since 1913) The experimental and theoretical deductions harmonize with what has been learned from practical experience in infant feeding emphasizing in particular the importance of variety in the diet, even in the first months of life, especially for the artificially fed The research seems to show that cow's milk lacks some necessary growth-promoting element or the mode of its preparation destroys some element, and this deficiency must be made up for the child to grow properly But on the other hand milk displayed a surprising efficiency in bringing an otherwise insufficient diet up to the proper standard Addition of 10 per cent desiccated milk to an exclusive milk diet brought it up to full efficiency This happened also when barley-malt was added to the food Honey syrup other cereals, beans, casein smaller proportions of desiccated milk, and alcoholic extracts of barley-malt of carrots and of egg yolk failed to display any such action when added to the same diet

Blood Pressure in Children After Injection of Epinephrin—Normal children respond with a considerable increase in the blood pressure, unmodified by change of position With a weak pulse and low tension there may be little if any rise in the pressure, but it rises on reclining if the vasomotor system is stable With unstable innervation, there is usually

a prompt but slight rise in the pressure but no modification with change of position The vessels themselves seem to be partly responsible for the differences

March 1920 **91** No 3

*Composition of Different Parts of the Body E Klose—p 157
*Tests of Intelligence of Young Children J Peiser—p 182
Influence of Whey on Intestinal Epithelium E Freudenberg—pp 201 207
*Constitutional Inferiority of the Circulatory System in Children E Schiff—p 217

Metabolism in the Skin—Klose has been investigating the chemical composition of different parts of the body in the new-born, and here reports the results of his research on the skin of the back from nineteen infants The skin seems to be the first part of the body called on to store water in pathologic conditions and it is also active in the mineral metabolism storing and eliminating mineral substances independently of the water metabolism

Tests of the Intelligence of Young Children—The test which earliest shows reasoning power in a young infant is when it draws a coveted object into its reach by pulling up the counterpane or paper on which the object is lying Infants of 9 months do this Peiser describes a number of other tests for older infants graded for their age and intelligence One of the most instructive tests is to place between the infant and the coveted object a stick with a crooked handle It takes exceptional intelligence for an infant to use the crook to pull up the object

Constitutional Inferiority of the Circulatory System in Children—Schiff classifies children with a constant pallor and irritable weakness of the nervous system but no anemia according as the vasomotor system is unstable or not There is in all a history of headaches dizziness slight syncopal attacks, palpitation and chilliness and the children tire easily and are dull The pulse is small almost thready, the heart sounds are dull at the base and functional murmurs are common The outline of the heart differs from normal and the excursions of the diaphragm are inadequate The blood is not normally distributed throughout the body and the result is an arterial anemia maintaining a vicious circle The reaction to epinephrin differs in the children with stable or unstable vasomotor system, but the effect shows that the instability is an advantage rather than the reverse This constitutional inferiority of the circulatory system enhances the danger from acute infectious diseases

April 1920 **91**, No 4

*Digestion of Meat by Infants P Karger and A Peiper—p 235
*Experiences with Intubation M Hohlfeld—p 240
*Post-scarlatinal Nephritis E Stransky—p 259
Ileus from Helminths Sara von Uji (Budapest)—p 274
Scurvy in Infants H Vogt—p 278

Digestion of Meat by Infants—Karger and Peiper tabulate the metabolic findings in four healthy infants from 2½ to 5 months old before and during periods in which they were given 10 gm daily of boiled beef so finely divided that the particles could be added to the infant's bottle and it could suck the suspension easily No digestive disturbance was noted and the stools were not modified while the nitrogen balance showed a decided gain thereafter Everything indicated that the meat was well digested and that the children thrived on it Lundell has reported excellent results in a large series of infants given meat, egg fish and vegetables after they were 6 months old and Lovgren and Monrad report similar experiences

Experiences with Intubation in Diphtheria—Hohlfeld found pressure ulcers at necropsy in 25 of 99 cases in which intubation had been done At the Leipzig children's clinic intubation was required in 428 of 433 cases of stenosis In some of the clinical cases there was suppuration in the skin of the front of the throat, in some it was the only sign of the pressure ulcer within, but it did not become apparent until several days after extubation The black spots on the tube which are assumed to correspond to pressure ulcers did not always thus correspond in his experience When repeated reintubation is necessary by using a tube of a different shape the pressure is shifted and he advises to try this early not waiting for ulceration In nineteen of twenty-two cases of retained tubes merely using a tube of another model answered the purpose In the three other cases even changing the models several times coating each with alum-gelatin was unable to cure the process He makes a point now of introducing a tube of another model whenever the tube is coughed out By leaving the long tube in place the tissues are protected against stenosis This is especially necessary with infants less than a year old the pressure ulcers were numerous and severer in this group than in others

Post-scarlatinal Nephritis—Stransky describes seventeen cases in which he studied the scarlatinal nephritis and applied treatment according to the latest knowledge in regard to the nature and treatment of kidney diseases He always views hemorrhagic nephritis in a child as suspicious of scarlet fever even when there is nothing in the history to suggest it otherwise The first thing is to rest the kidneys and he allows nothing by the mouth the first day except at most a little water by the spoonful occasionally The second third and fourth day he gives 2 or 3 pints of "malt coffee" with abundance of sugar The child thus gets over 100 gm sugar per day Then 500 c.c. of water is given fasting, if it is all eliminated in from two to four hours he allows more water If not he continues to keep the intake of water low The food is then increased keeping it salt poor and albumin poor potatoes with fat or butter gruels and crackers In his thirty cases there was no death from the nephritis, the only death in the group was from tuberculosis although one child was unconscious with convulsions when admitted and others presented symptoms of actual uremia He warns that the albuminuria may persist for weeks after subsidence of the acute symptoms

Ileus from Helminths—Uji reports a case of ileus in a boy of 7 the symptoms suggesting invagination Nothing to explain the obstruction was found at the laparotomy until a clump of ascarides was palpated through the wall of the small intestine

Monatsschrift f Geburtshulfe u Gynakologie, Berlin

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*Premature Rupture of Fetal Membrane H R Schmidt—p 1
*Active Treatment of Febrile Abortion W Kolde—p 17
*Loss of Weight and Fever in the Newborn F Heimann—p 27
*Vicarious Menstruation A Roth—p 41
Artificial Vagina A Herrmann—p 58

Cause of Premature Rupture of the Membranes—Schmidt presents evidence that in certain cases some inflammatory process in the uterine mucosa involves the fetal membranes and is responsible for the premature rupture In a case described there was no external cause for the rupture and six days later a 7 months living child was born The inflammatory process in the cervical mucosa had evidently been responsible for the frequent hemorrhages during the pregnancy and for the weakening and rupture of the lower pole of the membranes under the weight of the fetus and fluid

Active Treatment of Febrile Abortion—Kolde says that at the Magdeburg women's clinic the 1318 cases of abortion or miscarriage formed 19 85 per cent of all the cases at the clinic and they yielded 18 8 per cent of all the deaths at the clinic during the five year period Omitting the cancer cases and the cases of severe puerperal fever they formed 32 6 per cent of all the fatalities The mortality was 3 8 per cent in the cases treated by prompt evacuation of the uterus using the Winter abortion forceps and the fingers or possibly the blunt curet and rinsing out the uterus afterward with hot saline under very low pressure with a two way tube No tamponing unless there was much hemorrhage a little ergot or pituitary ensured the contraction of the uterus

Physiologic Loss of Weight and Transient Fever in the New-Born—Heimann concludes from study of 8441 new born infants during the last ten years that the loss of weight and the transient fever sometimes observed were due to a combination of several factors inadequate nourishment resorption of pyretogenic substances and the conflict between the meconium flora and the milk flora The fever and the loss of weight are harmless and soon made up but the fact that

they occur on about the same day shows the connection between them The number of cases has been much reduced since the infants are placed at the breast the twelfth hour instead of waiting for twenty-four hours as was the rule until the last few years

Vicarious Menstruation —Roth has found 225 cases of vicarious menstruation recorded since 1870 the bleeding occurring from the nose (30 per cent) fistulas skin (10 per cent), lungs (8 per cent) breast stomach, mouth and throat (4 or 5 per cent each), bladder ear eye, intestine, larynx trachea kidneys and vagina (from 3 5 to 0 45 per cent) The bleeding was purely vicarious in 20 per cent and supplementary in 75 per cent In three cases the vicarious hemorrhages from the lungs or bronchi proved fatal Of course only the severer cases are published In one of two cases personally observed the woman began to bleed from the bowel at regular intervals nine months after the onset of the menopause The other patient was a young woman who vomited blood from the stomach, without retching at each return of the menstrual period The stomach content was free from blood during the intervals

February, 1920 51, No 2

Placenta Praevia T Lonne —p 74
*Hemorrhagic Purpura Charlotte Ehrenberg —p 99
Comparison of Methods of Treating the Umbilicus W Lang—p 118
The Internal Secretions and Practical Gynecology B Aschner —p 130

Placenta Praevia —Lonne relates that there were only ten primiparas in his 200 cases of placenta praevia With the central type the fetal mortality was 50 per cent while it was only 30 2 per cent with lateral implantation, the maternal mortality was 13 3 per cent with the central and 1 9 with the lateral In four cases there was internal hemorrhage although there was no loss of blood externally after the version or metreurynter and the uterus was contracting normally An estimate of conditions in the circulation can be easily made with control of the pulse of the systolic murmur, and of the blood pressure with the Riva-Rocci cuff especially if the hemoglobin percentage is determined at the same time By systematic examination in this way we can estimate how much blood the woman has lost and how much more loss she can stand Measuring the girth of the abdomen is also instructive, any increase from the beginning of the birth is abnormal In three apparently moribund women the abdomen measuring 3 cm more than at the beginning of labor an emergency Porro operation brought the mothers and two of the children safely through He advocates systematic abdominal cesarean section for all cases of placenta praevia centralis and for lateral praevia when there has been much hemorrhage With this, the mortality of the mothers in recent compilations of 262 and 125 cases dropped to 4 and 2 4 per cent and the child mortality to 1 6 per cent in the latter group Extraction of the child through the abdomen wards off the excessive stretching of the cervix which is the main cause of atony of the uterus directly afterward It also saves further loss of blood, and averts danger of internal hemorrhage He regards section as indicated when there has been extensive hemorrhages even if the fetus is already dead

Hemorrhagic Purpura —Ehrenberg accepts an essential thrombopeny as the main element in the clinical picture of Werlhof's disease, and describes a case in a girl of 19 in which the purple patches and hemorrhages appeared about eight or ten days before each menses and persisted to the end The menstrual hemorrhages were often so severe as to threaten life An intravenous injection of a blood platelet preparation arrested the excessive menstrual hemorrhage on one occasion, justifying the use of this in threatening hemorrhages No other hemostyptics displayed any efficiency except injection by the vein of a 10 per cent solution of sodium chlorid, which seemed to check partially the hemorrhagic tendency for two hours After splenectomy the blood platelets rapidly increased in numbers, they gradually dropped back again, but never to the former low figure, and the tendency to hemorrhage seemed to be completely cured, the menses were normal and the purple patches did not reappear Certain points in this and other cases of hemorrhagic purpura suggest perverted functioning of the ovaries or some of their elements as explaining the phenomena observed

March 1920, 51, No 3

*Premature Separation of Placenta L Heidenhain —p 145
*Delivery with Narrow Pelvis V Hiess —p 149
*Operative Treatment for Sterility T Seitz —p 177
*Tuberculous Ulceration in the Vulva W Schade —p 190
The Mental Condition of Parturients F Poen gen —p 198 Cont'd

Premature Detachment of the Placenta —The previously healthy quintipara of 33, nearly at term with her sixth pregnancy, had pregnancy nephritis and suddenly signs of profuse internal hemorrhage developed, with intense pain in the uterus There were no signs of life from the fetus, and Heidenhain amputated the uterus without opening it The nephritis may have been responsible for the premature separation of the placenta but this could not be proved by the anatomic findings The rapid recovery from the nephritis confirmed its transient character The umbilical cord was wound around the neck of the child and measured only 39 cm

Delivery with Narrow Pelvis —Hiess reviews the experiences in a recent nine years with contracted pelvis at the Vienna women's clinic of which Schauta was chief at the time of his death The number of births was 2 264 in 1911 and 1 406 in 1918 Spontaneous delivery occurred in 11 1 per cent of the forty-five cases with true conjugate of 6 5 to 7 5 cm in 35 per cent of the 208 with 7 6 to 8 5 cm, in 54 per cent with 8 6 to 9 5 cm and in 47 1 per cent with 9 6 to 10 cm In a total of 419 cases of narrow pelvis spontaneous delivery occurred in 40 per cent but the proportion was 64 per cent among those women who had been admitted to the clinic before or at the commencement of labor This shows the wisdom of the expectant principle followed in the management of the cases but institutional supervision is almost indispensable for this

Operative Treatment of Sterility —Seitz has operated in twenty-two cases in which inflammatory processes in the ovaries or tubes had closed the lumen of the tubes In the majority the adnexa on one side had to be removed so the restoration of the passage was done only on one side in all but two The later history is known of fifteen of the women, conception occurred in two, but both aborted None of the other women have conceived but their menstrual disturbances have subsided The preferable technic is described and the participation of the uterine mucosa in the old inflammatory adnexitis is incriminated in the early arrest of the pregnancy The salpingostomatoplastic operation therefore is not advisable when the inflammatory conditions have been very severe or protracted but otherwise it is justified when the happiness of a household is threatened by the sterility

Tuberculous Ulceration in the Vulva —The extremely chronic course the fistulous passages edema and proliferation suggesting elephantiasis, form a characteristic picture of this manifestation of tuberculosis Schade compares a personal case described with those on record

Therapeutische Halbmonatshefte, Berlin

Jan 15 1920 34 No 2

*Surgical Treatment of Tabetics H Holfelder —p 33
Roentgen Treatment of the Tuberculous E Muhlmann —p 35
*Treatment of Addison's Disease H Quincke —p 42

Operative Treatment of Tabetic Joint Lesions —Holfelder comments on Oehlecker and Schmieden's excellent results from resection of joints in tabes They succeeded in nearly every case in inducing consolidation of the articulating surfaces and arresting the destructive process No anesthetic was required in some of the cases and the surgeon refrained from the use of the Esmarch band Of course the operation can be considered only when the process is aseptic

Addison's Disease —Quincke reports two cases in which all the symptoms of Addison's disease retrogressed completely, even to the pigmentation of the mucous membranes, under tonics and systematic administration of suprarenal tablets The patients were men of 65 and 70 who had been subjected to great deprivations for some time The suprarenal deficiency had evidently been merely functional, not organic

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RELATION OF ORTHOPEDIC SURGERY TO INDUSTRIAL SURGERY*

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PROVIDENCE, R I

The development of orthopedic surgery manifests a continuous, healthy growth from its humble beginnings in a past age Born from the urgent needs of countless crippled and deformed who covered the civilized earth, it has attained a healthy manhood in the most pregnant era of the world's history The present generation of physicians has seen this specialty develop from a guild of bracemakers to a fraternity of bone and joint surgeons whose operations cover a fairly large area of the human body

This endeavor has been accomplished by hard and aggressive work It was first necessary to convince the general surgeon that the treatment of deformities could be better carried out by the orthopedist, as he was then called This was the first step in the emasculation of modern orthopedic surgery With the general surgeon devoting himself to the fascinating problems of abdominal surgery, which was then developing into a splendid science, it was but natural for the orthopedist to concentrate on bone and joint surgery He did this so well, in the majority of cases, that he became known as an orthopedic surgeon, and was received into the ranks of those who may safely be entrusted with the scalpel

Then came the World War, providing varied and remarkable opportunities for work and development For the first time in his career—speaking for the great mass of the specialty—the orthopedic surgeon was assigned to the treatment of fresh fractures and of deformities in the incipient stage To be sure he entered by the back door, for he was supposed merely to supervise the application of the necessary splints after the surgical operation had been performed He was not yet fully to be trusted with the surgical care of this class of patients He was, however, fortunately situated New methods of treatment were being brought forth daily He witnessed the evolution of the Dakin-Carrel method of wound sterilization, the new work on osteomyelitis and nerve surgery, the lessons of bone-grafting, the successes and failures of complicated joint fractures

When the orthopedic surgeon returned to civil practice, it gradually dawned on him, as the same light came to others who had witnessed the transformation of those short, active years that this had all been a preparation for a greater opportunity for usefulness

In certain communities in this country it had been recognized for several years that the properly trained orthopedic surgeon was the logical man to treat fresh fractures Whether the fracture is simple or compound, the treatment is principally mechanical, and as such it naturally fell into the hands of the surgeon who had proved himself competent to treat such accidents Since the war the orthopedic surgeon has been more often consulted in cases of severe fracture In some hospitals he has been asked to assume the care of fresh fractures of the extremities Cases of osteomyelitis have lately been placed in his hands He has more frequently been asked to advise in cases of nerve injury, bone-grafting and deformities following accident Where he was formerly asked to apply the external splint he has lately been requested to insert the internal splint

THE FIELD OF INDUSTRIAL SURGERY

If our premises are well founded, all this experience means that the orthopedic surgeon has arrived at the threshold of the greatest opportunity in his career —the invasion of the field of industrial surgery The thought is not a new one Other authors have ably pointed the way I wish to emphasize somewhat specifically the means by which the orthopedic surgeon may have a part in a great movement

It is a far cry from the day when the injured employee of an industrial plant was sent to the nearest physician for treatment, or was placed under the care of a medical man who served all the employees under the contract plan Many of the largest industrial plants in the country now employ full-time physicians who have had special training in industrial hygiene and in the treatment of diseases and accidents Schools of industrial hygiene are being established in medical schools in this country A flourishing periodical the *Journal of Industrial Hygiene,* has recently been added to our current literature The handwriting is on the wall The medical profession must interest itself in this remarkable movement for improving the working conditions of employees, and in the treatment of them when ill or injured

In this movement orthopedic surgery has a definite place Many large industrial plants have appointed a staff of physicians, including all specialties, to furnish medical attention to their employees More industrial organizations will adopt this plan in the near future This can be done in much the same way in which consultants served on examining boards during the selective draft examinations in the late war By such a procedure many a disabling condition will be recognized early, and proper treatment can be instituted Many otherwise efficient laborers will be restored to the ranks of those fit to work or will be eliminated, if unfitted for this particular industry

* Chairman's address read before the Section on Orthopedic Surgery at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

In the actual treatment of injuries, the orthopedic surgeon will be consulted in cases of severe and complicated fractures, especially those involving joints, in nerve injuries resulting in potential deformities, in severe tendon injuries, in cases of bone and joint disease occurring during employment If the case is one which the orthopedic surgeon is preeminently fitted to treat, it should be assigned to him as early as possible after the injury, in order that every reasonable means for preventing deformity and securing early function may be employed It is unfair to both patient and orthopedic surgeon, and disheartening to the latter, if a patient is turned over to him when it is too late to secure the best functional result, or when the treatment consists in the correction of a preventable deformity If he is to be entrusted with the care of the case at all, he should be permitted to see the patient early

The after-treatment in these cases is most important Bakings, massage and active and passive movements are effective only if the best possible result has been obtained by previous surgical and mechanical measures A potential ankylosis will not be greatly benefited by the use of physical therapeutics

PROBLEM OF THE CONVALESCENT EMPLOYEE

The convalescence is the most critical period of the disability for the employee, for the employer and for the surgeon Cooperation between these three factors is absolutely essential in the future, or else industrial conditions will be seriously disturbed The time lost to production in this country by inability to put the injured employee back in his proper place at the earliest moment is appalling when reduced to figures More serious, perhaps, is the effect on the morale of the worker himself A slight influence is sometimes enough to turn an industrious workman into a park bench loafer A man who occupies a hospital bed for eight weeks while a fractured femur is knitting often needs a bit of uplift to turn his steps into the road of sober industry again

Employers and insurance carriers should seek the advice and cooperation of the surgeon, and work through the medium of the nurse and social worker Employment should be provided for the idle man This should begin while he is still in bed or incapacitated, and as soon as he is able to get to his work he should be given some kind of useful employment It is just here that the surgeon and the nurse or social worker can be of the greatest assistance to the employer Too often the superintendent or the foreman of a department is told to give a convalescent light work, without being informed as to the ability of the patient to work Being more interested in securing efficient production in his department than he is in helping to restore this workman to health, the foreman quickly loses interest when he finds that the employee is, for the moment, a negligable factor in production The result is that the injured man is allowed to drift, and his name is simply kept on the pay-roll until he is able to work, or is discharged as incompetent

The surgeon can suggest types of work which the employee can undertake at this stage in his convalescence, and the nurse and social worker, by visiting the working parts of the plant, can see to it that the worker so employs his time that his injured part shall be restored most quickly to usefulness By this means he will be prevented from losing the will to work, which is all essential to his future

Workmen's compensation laws have done much thus far to improve the treatment of the injured employee by providing prompt and skilful medical attention, and by relieving mental anxiety through the payment of compensation during the period of disability The weak link in the chain is the period of convalescence, during which the employee needs friendly coaching to prepare him, physically and mentally, for his occupation This is more important, of course, in what may be termed orthopedic injuries, than in any other class of accidents, on account of the long period of disability In schemes of cooperation, hitherto, the medical man has generally been overlooked He should assert his position and point out the dangers of the convalescent period, for he is the one essential factor in the successful solution of the problem Let him but urge the need of cooperation in this matter, and it will speedily be brought about

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RENAL GLYCOSURIA*

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By the term "renal glycosuria," often incorrectly called "renal diabetes," is meant an abnormal permeability of the kidney to glucose while the sugar content of the blood remains within normal limits and the tissues of the body retain their power to utilize carbohydrates in a normal way There accompanies this condition a constant, slightly variable glycosuria which, in the majority of the reported cases, is only slightly, if at all, affected by diet the usual symptoms of diabetes, namely, polyuria polydipsia, polyphagia, loss of weight, etc, are conspicuous by their absence

Certainly this condition is not common, according to our present belief, on the other hand, there are probably many more patients under treatment for mild diabetes who really have renal glycosuria than our present knowledge would indicate The simplified and more general use of methods for the study of blood sugar will be of great benefit in differentiating this group of cases The recent article by Allen [1] reporting three cases of renal glycosuria among forty cases of supposed diabetes, sent to U S Army General Hospital No 9, is of the greatest interest and has given new impetus to the study of this condition

The disease, as in the case herewith reported, is usually discovered during the course of a routine physical examination for some other condition, or the patient may be rejected for life insurance because of the discovery of sugar in the urine The present case is particularly interesting since when the patient was first seen, four years ago, it was thought that he had so-called renal diabetes although at that time this opinion was held without having sufficient proof that such was the case, since then, however, laboratory investigations have confirmed the clinical diagnosis

REPORT OF CASE

History—Mr D No 3104, aged 23 white single clerk in a hardware store came under observation, Aug 30 1916 His family consisting of a father aged 52, a mother, aged 46 a brother, aged 18, and a sister, aged 16, were all living and

* Read before the Section on Practice of Medicine at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Allen F M Three Cases of Renal Glycosuria Arch Int Med 24 523 (Nov) 1919

well, no brothers or sisters were dead There was no history of tuberculosis cancer, nervous or mental diseases or diabetes mellitus in the family The urine from all members of the family had been examined many times and found to be sugar free The patient had had typhoid fever at 16 years of age, and was sick about one month There were no complications, and recovery was complete He had had measles at 18 a very mild attack with no complications, he was in bed only one day His general health had always been very good, he had had no sicknesses except those mentioned Occasionally he had a slight headache, not particularly severe,

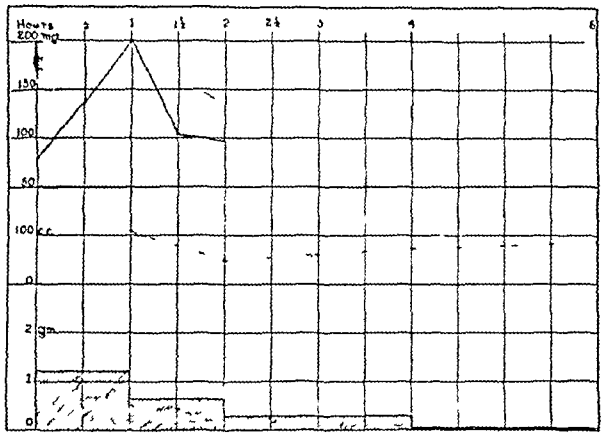

Chart 1—Patient's response to a meal of 98 gm of glucose solid line blood sugar response in milligrams per hundred cubic centimeters broken line urine volume response shaded area sugar output

which was precipitated by constipation The appetite was good, he ate anything and everything that he desired and he never suffered with indigestion or abdominal pains of any character He urinated three or four times during the day never at night, he had never noticed any excessive urination, nor had he had any pain on voiding or any blood in the urine The bowels were regular, there was no diarrhea or dysentery He slept well, always averaging about eight hours, took a great deal of outdoor exercise, walking golf, basket ball and various other sports, smoked about twenty cigarets daily, had never used alcohol except for an occasional drink, and had lost no weight, his average weight being 125 pounds For the last five or six months he had been troubled considerably with acne pustules on the face which he said had been worse during the last three or four weeks and he desired something done for this condition

Physical Examination—The patient was well built and muscular and was 5 feet 6 inches tall The skin presented a healthy color except for the presence of a few acne pimples on the face and neck The pupils were equal and reacted to light and accommodation The eye movements were normal the field of vision tested roughly, was apparently normal the sclera was clear and there was no edema of the lids There was no discharge from the ears the ear drums were apparently normal, hearing was 20/20 The anterior and posterior cervical glands were not felt, the axillaries were slightly palpable and the epitrochlears and inguinals were not enlarged The thyroid was apparently normal in size The teeth were in fairly good condition although a subsequent roentgen ray report showed that four had some infection about the roots, there was a very slight pyorrhea The tonsils were easily seen but presented no marked evidence of infection

The chest was well formed, expansion was good and was equal on the two sides tactile fremitus was normal, the percussion note was clear, and auscultation elicited distinct breath sounds that were apparently normal and free from rales

On examination of the heart the point of maximum intensity was seen and felt in the fifth interspace 8 5 cm to the left of the midsternal line, dulness, 9 5 cm , no increase to the right, there was no increase in the retrosternal area of dulness, the heart sounds at the apex and base were clear and of normal relative intensity The pulse rate was 80 per minute regular in force and rhythm and small in volume, the radial axillary and temporal arteries were not felt The systolic blood pressure was 120 mm of mercury, and the diastolic 80 mm

The abdomen was scaphoid, the edge of the liver was not felt, there was no tenderness or mass to be made out in the region of the epigastrium The right and left kidneys were both palpable the right descended markedly, the upper pole was palpable but was not tender and apparently not enlarged The spleen was not felt and the area of dulness was not increased

The genitalia were normal the prostate was not enlarged or tender and there was no history of venereal infection

The knee jerks were present but not exaggerated Other reflexes were normal There was no thickening about any of the joints The spine was straight, there was no lordosis or kyphosis The muscular strength was very good, there was no disturbance of sensation and no tremors were made out Rectal examination revealed only a few small hemorrhoids

Laboratory Examinations—Blood examinations revealed red blood corpuscles 4 600 000, white blood corpuscles 6 800, hemoglobin 90 per cent Differential count revealed nothing abnormal The Wassermann reaction was negative The specific gravity of a casual specimen of urine was 1 023 It contained a marked trace of albumin very heavy sugar no acetone or diacetic acid an occasional leukocyte and an occasional hyaline cast A twenty-four hour specimen consisted of 1 650 c c , it was of acid reaction, the specific gravity was 1 026 there was a moderate trace of albumin, sugar was 2 1 per cent *There was no acetone or diacetic acid, an occasional hyaline cast was observed* Night and morning specimens of urine were collected separately It was soon observed that the albumin in the morning specimen was decidedly less than in the night specimen and after a period of rest for twenty-four hours it would disappear (*This condition was* regarded as postural albuminuria) It was also found that no relationship could be shown to exist between the amount of sugar excreted and the amount of albumin present in the

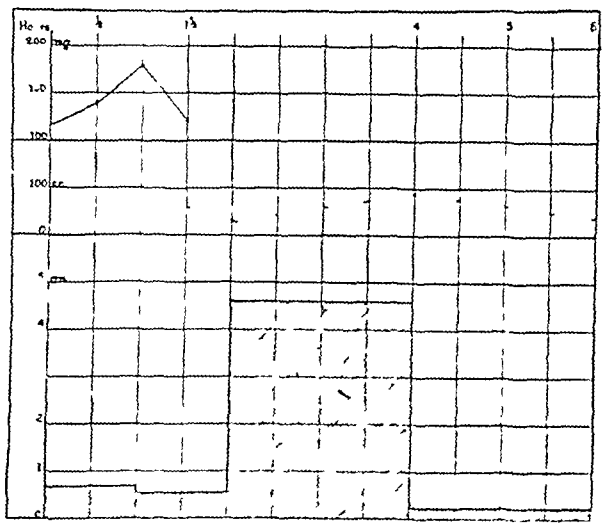

Chart 2—Patient's response to the ingestion of 147 gm of glucose solid line blood sugar response in milligrams per hundred cubic centimeters broken line urine volume shaded area sugar output

urine Repeated and numerous examinations of single and twenty four hour specimens of urine were made all showing the presence of sugar of from 0 5 per cent to 2 1 per cent The phenolsulphonephthalein output in two hours was 65 per cent Examination of the feces was negative No blood sugar studies were made at this time

Treatment and Progress—This at first was regarded as a case of very mild diabetes mellitus because on diet the patient's total sugar output for the tw

was small An attempt was made by restricting the amount of carbohydrate and protein intake to free him completely from sugar, we were never successful in having him sugar free for any length of time, even on the most restricted diet As a result of these dietetic experiences, it was noted that the twenty-four hour output of sugar was almost as much on a diet low in carbohydrate and protein as it was when the diet was unrestricted Consequently, after a convincing trial and complaint on the part of the patient of weakness and loss of weight, he resumed his usual amount of food with the result that he regained the lost weight and continued his work in comfort, although glucose was constantly present in the urine After this experience, several times repeated, it was apparent that the disease was not a true diabetes mellitus, but one of "renal diabetes" For over three years he was practically on an unrestricted carbohydrate diet, and now the glycosuria is no greater than when he first came under observation He enjoys excellent health and shows no clinical evidence of diabetes

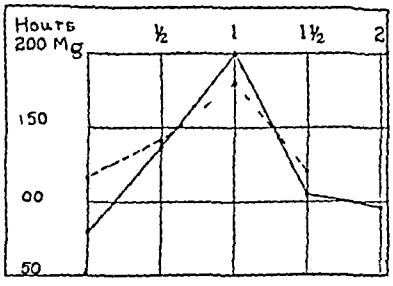

Chart 3.—Blood sugar response as influenced by the ingestion of varying amounts of glucose solid line patient received 1 75 gm per kilogram of body weight (98 9 gm) broken line patient received one half as much in addition (147 gm)

RESULTS OF STUDIES TO DETERMINE NATURE OF THE DISEASE

The patient made many attempts to enter various officers' training camps during the recent war, but he was always rejected because of the presence of sugar in the urine, although he finally did get into some form of government service After his return from this service, the studies recorded in the accompanying charts were undertaken to establish more clearly the nature of the disease

Chart 1 represents the patient's blood sugar, urinary sugar and urine volume response to a meal of 98 gm of glucose given according to the method of Janney and Isaacson [2] The rise of blood sugar was within normal limits, and the urinary sugar distinctly increased with the height of the blood sugar curve, but the output was small in comparison with the intake In other words, with increased glycemia, there is an increased glycosuria, but no increase in the total amount of urine voided

Chart 2 represents the patient's blood sugar, urinary sugar and urine volume response after the ingestion of 147 gm of glucose, which was half as much again as was given for Chart 1 The response on the part of the blood to the ingestion of the increased amount of glucose was a higher rise in the blood sugar curve, on the part of the urine, there was a marked increase in the total output of glucose from the second to the fourth hour, again returning to the usual amount of sugar after six hours One and one-half hours after the ingestion of such a large amount of glucose, the patient showed a slight reaction evidenced by itching of the skin, puffiness about the face, weakness, giddiness and nausea, from which he recovered in two hours Chart 3 is a combination of Charts 1 and 2, for comparison

Chart 4 represents the response on the part of the patient to the ingestion of 98 gm of glucose dissolved in 245 c c of water, with the added juice of one lemon In addition 200 c c of water were given every half hour in order to determine the effect of diuresis on the amount of sugar excreted The blood sugar curve ran unusually high (we have observed in normal persons that such a response occurs when water is given in this way), but returned to its level in two and one-half hours The urine output was markedly increased, amounting during the period of the test to 1,158 c c, and the output of sugar amounting to 7 18 gm The concentration of the urinary sugar was never higher than 1 5 per cent , the lowest is 0 3 per cent It would seem from this that with an increased excretion of urine, there is an increase in the sugar output

Chart 5 shows the results of a recent study to determine the effect of diets, with varying amounts of carbohydrate, protein and fat, on the blood sugar, urinary sugar and urine volume in this patient Fasting for three days caused the blood sugar to remain practically the same, the sugar output in grams slightly diminished with a slight diminution of the percentage of sugar in the urine There was no change in urine volume On a diet rich in carbohydrates, the daily blood sugar percentage remained practically the same, there was a slight increase in the twenty-four hour urinary sugar output, and very little change was noted in the percentage of urinary sugar The urine volume was not increased It is interesting to note that with a diet rich in proteins, the blood sugar percentage showed a rather marked increase, and coincident with the increase in the blood sugar there was a slight increase in the amount of the daily urinary sugar output, but no increase of moment in the volume of urine excreted Allen [1] previously noted the effect of a high protein diet on the blood sugar in patients with renal glycosuria The remainder of the chart shows the results of examinations made while the patient was on an unrestricted diet, no changes of moment were noted either in the blood sugar, urinary sugar or urine volume

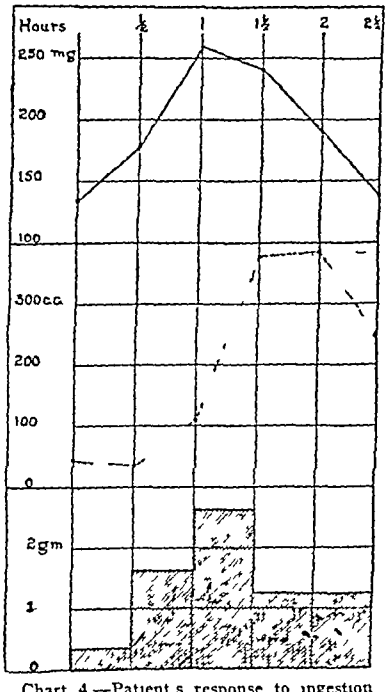

Chart 4.—Patient s response to ingestion of 98 gm of glucose dissolved in 245 c c of water with the juice of one lemon added solid line blood sugar response in milligrams per hundred cubic centimeters broken line urine volume shaded area sugar output

METHODS OF DETERMINING THE PRESENCE OF GLUCOSE

The methods used in determining the presence of glucose in this patient were the copper reduction tests, fermentation test, the formation of osazone crystals with phenylhydrazin, and the determination of the melting point of the crystals The percentage of

2 Janney N W and Isaacson V I A Blood Sugar Tolerance Test J A M A 70 113 (April 20) 1918

urinary sugar was determined with the polariscope and Benedict's quantitative method [3] Blood sugar determinations were made by the Lewis-Benedict method [4] and Epstein's method

I believe that from these studies and the length of time the patient has been under observation, I am justified in terming this a case of renal glycosuria It does not seem necessary or expedient to review the reported cases of this disease, as this has been recently done by Lewis and Mosenthal, [5] Bailey, [6] Beard and Grave, [7] and Williams and Humphreys [8]

The essentials as agreed on by the majority of writers for the diagnosis of this condition are

1 A normal blood sugar content of between 70 and 110 mg per hundred c c of blood

2 The constant presence in the urine of sugar which is definitely known to be glucose

3 Little, if any, change in the glycosuria on increase or decrease in the carbohydrate content of the diet

4 An absence of the usual symptoms of diabetes mellitus

SUMMARY

It seems to be fairly well established that there is a condition in which the kidney is abnormally permeable to glucose The exact nature, cause and the factors determining this permeability are little understood Many of the cases show many points of resemblance to phlorizin glycosuria Among the reported cases there are varying degrees of renal permeability to glucose, whether these are early or late stages in the progress of the disease or the result of a greater or less pathologic condition of the kidney is yet to be determined Few of the patients have been observed for a sufficient length of time to determine definitely whether they develop a true diabetes mellitus or not, although it would seem that such does not occur and the existence of the condition is not incompatible with a normal existence In the case here reported, during the four years of observation, there has been no demonstrable progress of the disease The condition, if it is a clinical entity and if it is due solely to an increased renal permeability, offers certain definite problems for future study

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ABSTRACT OF DISCUSSION

DR NELSON W JANNEY, Santa Barbara Calif The blood glucose tolerance test proposed by Hammond and Hirschman and as modified by me has proved of greatest value in determining the existence of renal glycosuria It seems as if in typical cases of renal glycosuria we should expect a perfectly normal blood glucose curve, yet in Dr Paullin's case the curve is higher than normal The blood sugar reaction appears to remain unchanged by an increased diet, although there is a slight increase in the urinary sugar One can, however, be deceived in judging these cases merely by the height of the blood sugar I have seen cases, particularly in children in which the blood sugar had not risen over twelve or at the most thirteen parts per ten thousand of blood, but which presented all the typical symptoms of the disease Perhaps it would be a safe rule to consider all cases of glycosuria as being diabetes mellitus until proved otherwise Renal glycosuria may also be found in cases of arteriosclerosis and chronic diffuse nephritis, but true diabetes mellitus may never develop These patients show a remarkably high and prolonged blood glucose curve, probably a retention phenomenon in distinction to the normal curve exhibited by the patients having renal glycosuria of unknown or idiopathic origin

DR ALBERT A HORNOR Boston Dr Paullin told me that he has undertaken some work to attempt to check the influence of water on blood sugar after ingestion of glucose by normals The influence of proteins in these cases emphasizes the point which Dr Allen has made so often that the carbohydrates proteins and fats must all be considered in the management of cases of diabetes All three elements of diet are important

DR ALLAN EUSTIS New Orleans The question of renal glycosuria is a very complicated one and it is only after a careful study of a case that such a diagnosis is justifiable Croftan showed several years ago that cases of severe intestinal toxemia are often associated with the presence of combined glycuronates in the urine which will reduce alkaline copper solutions The urine will not turn the plane of polarized light nor will it ferment with yeast, while the blood sugar will be normal If one judges such a case from the blood sugar and reduction with the urine only as a case of renal glycosuria he will be mistaken Many of these cases are treated as cases of true diabetes often with unnecessary inconvenience and hardship to the patient I see so many of these cases associated with intestinal toxemia which have gone unrecognized for years that I am forced to the conclusion that the profession does not appreciate the importance of determining the identity of the reducing substance in the urine In New Orleans where strong coffee is drunk, it is not infrequent to find urines from patients with deficient liver function which will reduce Fehling's solution

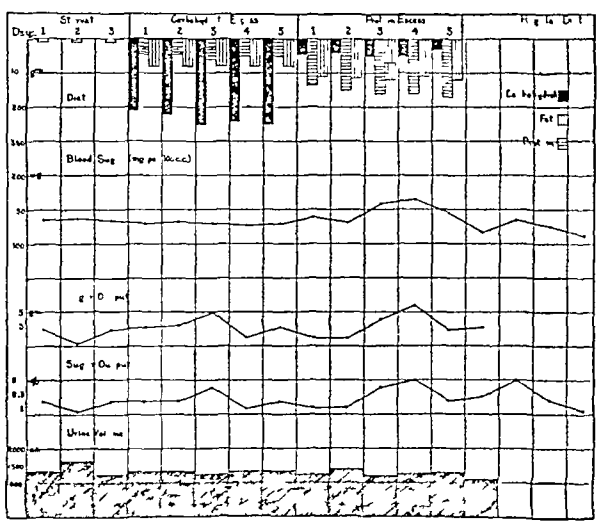

Chart 5 —Blood sugar urinary sugar and urine volume response to diets with varying amounts of carbohydrate protein and fat

Inasmuch as caffein is capable of this reducing action it is probably due to the presence in the urine of this substance

DR JAMES E PAULLIN Atlanta Ga The reducing substance in this case was shown to be glucose by the copper reduction fermentation tests and the formation of osazone crystals with phenylhydrazin and the determination of the melting point of these crystals

3 Benedict S R J Biol Chem **9** 57 1911
4 Lewis R C and Benedict S R J Biol Chem **20** 61 1915
5 Lewis D S and Mosenthal H O Bull Johns Hopkins Hosp **27** 133 (May) 1916
6 Bailey C V Studies on Alimentary Hyperglycemia and Glycosuria Arch Int Med **23** 455 (April) 1919 Am J M Sc **157** 221 (Feb) 1919
7 Beard A H and Grave A Floyd Renal Glycosuria Arch Int Med **21** 705 (June) 1918
8 Williams J R and Humphreys Observations on Tolerance and Rate of Utilization of Glucose in a Series of Individuals Exhibiting Various Degrees of Diabetes Mellitus Arch Int Med **23** 559 (May) 1919

A Medical Dramatist—A play that has reached its hundredth presentation in Paris the C Q G d'Amour is said by the *Progres medical* to have been written by Dr P Rehm during a little leisure in the operating tent of the H O E. at Coulommiers July 18 1918

INTRAPLEURAL HYPERTENSION FOR EVACUATING PUS THROUGH BRONCHI

IN SPONTANEOUS PYOPNEUMOTHORAX

ALFRED MEYER, M D
NEW YORK
AND
BARNETT P STIVELMAN, M D
BEDFORD HILLS, N Y

Medical literature shows much conflict of opinion as to the best procedure in cases of pyopneumothorax in tuberculosis This conflict applies with special force to cases in which the pulmonary opening still exists, with discharge of the pleural pus by way of the bronchial tree In the latter case we usually have to deal with an infected cavity and septic symptoms, and the temptation is strong to have a thoracotomy performed, with or without rib resections But this does not appear rational with constant reinfection going on, although recommended by Finlay,[1] Powell [2] and Lord [3] Others dissent from this view and prefer the alternatives of periodic aspiration or continuous air-tight drainage (Fowler and Godlee)

There appears to be general agreement, however, that if we had a method of closing the pulmonary fistula and converting the open pyopneumothorax into a closed one it would be a distinct gain Unfortunately, we are face to face with a double dilemma—there is no method, surgical or otherwise, of dealing with tuberculous pulmonary fistulas, and even if there were, the difficulty of locating them [4] is so great that the proverb of catching a sailor before you hang him to the mast would be an appropriate analogy

The case reported herewith may hold the germ of an alternative method based on the idea of forcing out the pus from the pleural cavity and through the pulmonary fistula by increasing the pneumothorax, and subsequently introducing various solutions like methylene blue or watery iodin, and forcing them through the same route by means of the increased pressure obtained by the added pneumothorax We are, of course, not yet ready to report results, as this procedure was begun only a few weeks ago, but as cases of open pyopneumothorax falling under the observation of any single observer are, on the whole, very few, we wished to draw attention to the method in order to insure its wider trial

REPORT OF CASE

S G a man, aged 26, born in the United States, a porter admitted to the Bedford Sanatorium of the Montefiore Home, Aug 6, 1919, with irrelevant family and previous personal history, stated that he had been in perfect health until he was discharged from the army in October, 1918, when he caught cold and was confined to bed for six weeks, with moderate chills, fever and night sweats and distressing cough Subsequent improvement in all symptoms was marked until April 19, 1919, when he had a severe hemoptysis, losing about 16 ounces of blood Bloody expectoration continued for five days, and he was removed to Bellevue Hospital, April 24, where examination disclosed slight infiltration of the right apex and extensive infiltration with cavity formation in the left lung A left pneumothorax was induced, May 5, but the patient left the hospital of his own accord, June 3, after having received eight inflations The roentgen-ray examination before he left disclosed *almost complete collapse of the left lung and absence of adhesions*

On his admission to the sanatorium in August, physical examination of the chest gave evidence of tuberculous involvement of the right upper lobe, infiltration of the left upper lobe and thickened pleura (?) of the left base Succussion proved the presence of a hydropneumothorax, as did both fluoroscopy and roentgenograms, with the fluid level shown at the fourth rib The sputum was positive, and the urine Wassermann test and tuberculin fixation test negative

In the next five months the patient rapidly improved His temperatures remained nearly normal, he lost his cough and expectoration, and he gained twenty-three pounds The fluoroscope revealed complete absorption of the pneumothorax

About the middle of January of this year the patient began to complain of distressing pain in the left lower midaxillary region This was accompanied by a distressing cough and purulent expectoration A subfebrile temperature was noted in the afternoon, together with tachycardia and absolute anorexia Physical examination was not conclusive No splash could be elicited The left lower chest was markedly dull with a feeble respiratory murmur, but in view of the clinical symptoms and profuse purulent expectoration, the presence of a spontaneous pyopneumothorax with persistent bronchial communication was considered probable, and that was proved by the subsequent evidence

Feb 8, 1920 the white blood count was 15 400, with 70 per cent polymorphonuclears and 14 per cent small and 16 per cent large lymphocytes

February 9 a roentgenogram showed a definite pocket containing air and fluid *the pneumothorax being more extensive than when the patient was admitted* This was proof of a spontaneous pneumothorax as no air had been introduced during his stay at the sanatorium

February 12 exploratory puncture yielded 10 c c of pus, which was identical with the pus expectorated and in both the predominating organism was a gram-negative nonhemolytic streptococcus The pressure after the removal of the *10 c c of pus was +1 to +3 cm[5] of water, but after the* introduction of 100 c c of air, it rose to +8 to +9 Immediately after the introduction of the air the patient raised nearly the equivalent amount of pus (about 93 c c)

The clinical picture did not change for the better in the meantime The fever ranged between 101 and 102 5 and the cough was very distressing March 1, 1920 250 c c of air were introduced the initial pressure being from 0 to +2 cm of water The final pressure was *20* mm of mercury (about 27 cm of water) the mercurial manometer being used because of the inadequacy of the water manometer for such high pressures The patient again expectorated about 60 c c of pus identical with that aspirated and the pressure fell to about 1 mm of mercury (about 1 3 cm of water) March 15, this procedure was repeated for the third time, and roentgenograms were made before and after inflation In all, 100 c c of air were introduced the initial pressure being from 0 to +2 cm of water and the final pressure being +20 mm of mercury (25 cm of water), the patient expectorating *93* c c of pus

A roentgenogram taken after the procedure revealed definitely a fluid level reduction of at least 1½ inches compared with one taken immediately before With the object of getting further proof of the existence of the pulmonary fistula, similar intrapleural hypertension was employed, March *27*, for the fourth time, with the modification of injecting also 1 c c. of a saturated alcoholic solution of methylene blue Immediately thereafter *150* c c of air were injected and during the procedure about 150 c c of blue sputum were coughed up The fever chart showed an average reduction of 2 degrees for three days following this purely diagnostic methylene blue injection

1 Finlay Allbutt s System p 386
2 Powell Diseases of the Lungs Ed 5 p 144
3 Lord Diseases of the Bronchi p 589
4 We have not tried the method of locating the fistula by introducing liquid petrolatum into the pleura and fluoroscoping for escaping bubbles of air

5 All manometric readings are those above or below the zero mark the actual hydrostatic pressure would be double these figures

At our fifth attempt, April 6, we had an interesting experience The initial pressure was from 0 to +1 After 100 c c of air were introduced, the pressure rose to + 20 mm of mercury (27 cm of water) After 300 c c, the pressure had fallen to from —0 5 to + 1 5 cm of water and after 600 c c remained at from —0 5 to + 1 cm of water The low and uniform intrapleural pressure was evidently due to the fact that the air introduced escaped through the fistulous opening Fifty c c of 1 10 000 watery iodin solution were injected into the pleural cavity The patient brought up about 150 c c of pus during the operation The iodin solution did not cause any unusual irritation

Six days later at the sixth attempt, no hypertension was obtainable even for a short period, for there was evidently insufficient pus in the pleural cavity to cover the pulmonary opening

COMMENT

It is our intention to continue this method of expelling the pus, but to follow it at each sitting with injections of iodin of increasing strength, or alternately with methylene blue, in an attempt to close the pulmonary fistula and thus convert the case into a simple pyopneumothorax and ultimately permit a thoracotomy and rib resections, if necessary—this, of course, only if the patient's general condition warrants it The tolerance of the bronchial tree and trachea for solutions of iodin, 1 1,300, has been demonstrated many times in the last three years in the treatment by irrigation through the bronchoscope of nontuberculous bronchiectatic cavities and pulmonary abscesses In such a case seen recently by one of us, the patient stood a strength of 1 650 We have begun with a solution nearly fifteen times weaker merely as a matter of caution

A considerable search of the literature does not disclose any report of what might be called "pneumatic expulsion" of pus from the pleura, nor of the treatment of a tuberculous pulmonary fistula in the way described

The age of the adhesions in this case (probably from 4 to 5 months) seemed to us to justify using very much higher intrapleural pressures than we had ever employed before in ordinary artificial pneumothorax work, because we had less fear of their giving way with the formation of new pulmonary fistulas In addition to this, the very presence of the one proved fistula was to a certain extent a safety valve, as was shown by some manometric readings quoted above and some taken right after the discharge of pus through the mouth, the figures falling promptly to the initial low ones

The location and size of the opening, and hence the posture of the patient, may prove to be a very important element in obtaining pleural hypertension and expulsion of the pleural contents Our experience with the fifth injection proved this, hence, each patient's posture for the procedure may prove to be different

If no hypertension is attainable because the pulmonary opening is above the level of the pus, the chest could be filled with sterile water or with sterile salt solution, and hypertension then applied In fact, this procedure could be employed several times in succession at the same sitting—a species of scrubbing of the pleural cavity—before the final injection of the remedial agent

The method could also be combined with aspiration, leaving the hypertension as the final step for bathing the pleura and fistula with the remedial agent Malachite green or other agents might be substituted for the methylene blue and iodin Malachite green, in particular, has been recommended by laryngologists for its antibacterial and antiinflammatory effect Only a long period and a wide trial will hold out any hope of a probable answer on the relative value of this method and of the different agents used For the present, we can report that the maximum temperatures that had ranged for weeks between 102 and 103 8 have now fallen to between 99 6 and 100 4 daily, and the total sputum of 15 or 16 ounces daily has in the past three weeks averaged only 3 ounces Coincidentally, of course, there has been a considerable improvement in appetite and well-being

ULCER OF JEJUNUM FOLLOWING GASTROJEJUNOSTOMY*

WALLACE I TERRY, M D
SAN FRANCISCO

During the winter of 1901, while in attendance at the clinic of the late Prof Theodor Kocher of Bern, it was my good fortune to see him operate on a patient who had a perforating ulcer of the jejunum, following a gastrojejunostomy of the Roux or Y type Up to that time only six similar cases had been reported, so it excited considerable interest With the idea in mind that the gastric juice was responsible for these ulcers, I carried out experiments with various types of gastro-enterostomy but in no case did ulcers of the jejunum develop Later, in 1903, Watts reported the occurrence of two ulcers of the jejunum, one perforating, in a dog three months after a gastrojejunostomy Exalto, Wilkie, Soresi and others found secondary ulcers of the jejunum following gastrojejunostomy in animals Gronnerud of Chicago, in 1917, found ulcers quite frequently when the internal suture was nonabsorbable In those cases in which absorbable sutures were used, ulcers of the jejunum were only occasionally encountered and were usually minute The work of Gronnerud, based on some 5,000 experiments, is of great value in throwing light on this rather obscure condition He concluded that ulcers of the jejunum, following gastro-enterostomy, were caused almost exclusively by nonabsorbable sutures But this is not the only factor, as some of Gronnerud's, and Hartwell and Hoguet's experiments demonstrate, and as shown also by some clinical experience

It is my belief that the principal factor in the production of these ulcers is the introduction into the jejunum of non-neutralized acid gastric juice, and that trauma, be it from tight application of clamps, injuries of blood vessels or retained sutures, further lowers the resistance of the jejunum or of the anastomotic opening to the digestive action of the gastric juice The fact that, in a series of 155 cases which I have collected from the literature, in addition to three cases of my own, only one case of ulcer of the jejunum followed gastrojejunostomy for cancer of the stomach, lends considerable weight to the idea that the gastric secretion is the prime factor The duodenum has its own succus entericus with bile and pancreatic secretion to act as neutralizing agents, while the jejunum is much less able to protect itself against acid chyme

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

When we come to investigate the type of operation which was followed by jejunal or gastrojejunal ulcer, we find that out of 136 cases collected by Wright,[1] posterior gastrojejunostomy was done in fifty-four (40 per cent) while the anterior operation with or without entero-enterostomy was done in seventy-four (54 per cent) In the remaing eight cases (6 per cent) posterior gastro-enterostomy with entero-anastomosis was performed The significance of these figures is apparent, for posterior gastrojejunostomy has undoubtedly been performed much more frequently than the anterior operation, yet fewer cases of jejunal ulcer have occurred following it The further down the jejunum that the anastomosis with the stomach is made, the greater is the probability of development of jejunal ulcer, hence the greater number after the anterior operation because of the longer loop employed A posterior gastro-enterostomy with entero-anastomosis, or a Y operation, means deprivation of neutralizing agents to that portion of the jejunum attached to the stomach

Just what element in the gastric juice is necessary, we are as yet unable to say None of the reported cases give sufficient data as regards gastric analyses before, during and after the occurrence of jejunal ulcers In a few cases, hydrochloric acid was almost entirely absent Whether or not infection is a necessary concomitant is also a debated question The fact that a considerable portion of the reported cases were marginal, that is, involving both the stomach and jejunum at the point of anastomosis, and the further fact that retained sutures have been found at the anastomosis, lend weight to the idea that the nonabsorbable suture is much to blame

REPORT OF CASES

The following three cases have not been previously reported

CASE 1 (7464)—Mr J, aged 32 entered the University of California Hospital June 4, 1914 with the history of a posterior gastrojejunostomy performed elsewhere three and a half years previously for pyloric obstruction For twelve years he had had much gastric distress, often relieved by taking food or sodium bicarbonate Eight years before admission, he had very severe acute abdominal pain which was in all probability due to a perforated ulcer of the duodenum in view of the later operative findings Vomiting had been a prominent symptom previous to the gastro-enterostomy For two years after the operation he had been quite well, but a recurrence of his old symptoms had led to the performance of a second gastrojejunostomy and he was told that the previous opening had almost entirely closed The complaint which brought him to the hospital was pain felt a few centimeters to the left of the umbilicus, and loss of weight and strength Palpation revealed tenderness over the pain area The roentgen ray disclosed a six-hour stasis in the jejunum just beyond the anastomosis opening and a closed pylorus Dr W C Alvarez, who had previously seen the patient made a diagnosis of probable ulcer of the jejunum At operation, June 12, after the freeing of many adhesions of the upper abdominal viscera it was found that we were dealing with an ulcer in the efferent loop of the jejunum about 2 cm from the anastomosis The jejunum was firmly attached to the transverse colon at this point, and the ulcer had almost eroded through into the colon The ulcer was excised, the raw surface on the colon was covered with a tag of omentum, and the open area of jejunum was made a part of the gastro-enterostomy by slightly enlarging the opening into the stomach The internal suture was continuous silk, and the external was linen

The patient remained fairly well for two months, when he had an attack of pain in the left side of the abdomen, followed in twelve days by hematemesis and the passage of bloody stools Five months later he reentered the hospital with much the same complaint as before epigastric distress, sour eructations and nausea, with occasional attacks of vomiting Pain was often relieved by soda or food Analysis of the stomach contents after a test meal revealed free hydrochloric acid 55, total acid 75 After the usual examinations, including the roentgen ray, a diagnosis of ulcer of the jejunum was made At operation Feb 3, 1915 another ulcer of the jejunum was found in the afferent loop close to the stomach This portion of the jejunum was excised and the proximal end implanted into the efferent loop thus making a Y anastomosis It was further found that the ulcer had perforated the wall of the jejunum posteriorly, the base being formed by the pancreas The patient improved somewhat following the operation but fourteen months later it was reported that he had died from intestinal hemorrhage No necropsy was performed

CASE 2 (8216)—Mr O aged 43 entered the University of California Hospital Nov 15 1914 complaining of pain in the right lower abdomen and vomiting blood A gastrojejunostomy had been performed a year previously at another hospital, there being found an old healed ulcer of the stomach near the pylorus with a recent ulcer in the second portion of the duodenum The internal suture was chromic catgut and the external was linen both being continuous The pylorus was plicated The patient remained well for only two months after the gastro-enterostomy With the return of pain there was vomiting and at one time a considerable amount of blood was vomited and also passed by rectum The patient lost 30 pounds in weight Examination revealed a tender mass 4 cm to the left of the umbilicus, a test meal showed free hydrochloric acid 45 total acid 60, the Wassermann reaction was negative and there was occult blood in the stools A diagnosis of probable jejunal ulcer was made At operation, November 16 a marginal ulcer was found nearly encircling the anastomosis, the lumen was thereby much narrowed and would just admit a finger tip The pylorus was patent It was felt that excision of those portions of the stomach and jejunum involved in the ulcer was unwise in view of the patient's poor physical condition, so a gastroduodenostomy was performed after mobilizing the third portion of the duodenum The internal suture was made with chromic catgut and the external with linen Recovery was without incident and at the last report the patient was all right

CASE 3—Miss A, aged 52 was referred to me in 1918 by Dr Eliot Alden of Los Angeles with a history of probable ulcer of the stomach extending back to the age of 25 In 1911 a posterior gastrojejunostomy was performed Nine months later, pain began in the left colonic region, and in 1912, she had two hemorrhages, vomited blood and had tarry stools In 1913 a pylorectomy was performed, but during the next four years there were attacks of pain to the left of the umbilicus and four more hemorrhages A gastric analysis in 1915 revealed only slight acidity Roentgen-ray examination however, disclosed an unusual delay in the passage of barium in the jejunum just beyond the gastro-enterostomy opening In view of the history of persistent pain to the left of the umbilicus the frequent hemorrhages and the roentgen-ray findings a diagnosis of jejunal ulcer was made and operation advised This was carried out, Jan 25, 1918 A gastrojejunal ulcer was found on the anterior wall with considerable distortion and contraction of the jejunum at that point Excision of the entire ulcer and reestablishment of the anastomosis with tanned catgut sutures were carried out Three months later the patient was operated on for acute gangrenous appendicitis Two years later she had pain and tenderness in the epigastrium which were diagnosed as recurrent ulcer, but the symptoms subsided promptly on an

1 Wright (Brit J Surg **6** 390 1919) gives a list of nearly all reported cases Other cases are recorded in Percy Surg Gynec & Obst **10** 316 1910 Carman R D and Balfour D C Gastro jejunal Ulcers Their Roentgenologic and Surgical Aspects J A M A **65** 227 (July 17) 1915 Urrutia Siglo medico **64** 470 (June 30) 1917 abstr J A M A **69** 678 (Aug 25) 1917 Coffey Ann Surg **71** 303 1920

ulcer diet Whether she will again have jejunal ulcer is for the future to tell

In none of the foregoing cases were any retained sutures found, although search was made for them To me, the striking feature in the symptoms presented by these three cases and by many others from the literature was the pain and tenderness to the left of the umbilicus The beginning of the jejunum is just to the left of the spine and at the level of the second lumbar vertebra, while the umbilicus is opposite the third or fourth lumbar vertebra, so I am inclined to believe that the tender area is similar in type to the Head zones Thus the Mayo-Robson point is not directly over the gallbladder, nor is the McBurney point directly over the appendix, but the tenderness is referred to those points May it not be that the pain from an ulcer in the upper part of the jejunum is referred to a point from 2 to 4 cm to the left of the umbilicus?

The value of careful roentgen-ray studies in the diagnosis of these ulcers has been emphasized by a number of observers Perforation of the jejunal ulcers either into the peritoneal cavity or into the transverse colon has been reported in some fifty-five cases, most of them previous to 1910, so that it is fair to presume that earlier diagnoses have been made in the later cases In many of the reported cases of acute perforation, there was a history of chronic antecedent pain or discomfort

CONCLUSIONS

As a result of my study of jejunal and gastrojejunal ulcers following gastro-enterostomy, the following conclusions are offered

1 The exact etiology still remains in doubt, in all probability the principal factor is the diversion of acid chyme into a part of the intestine, which has less neutralizing power than the duodenum The other factors of prime importance are trauma, especially from retained sutures or anastomosis buttons, and infection

2 In view of the very few reported cases of ulcer of the duodenum following pyloroplasty or gastroduodenostomy,[2] it would seem wise to employ those operations in suitable cases

3 Gastro-enterostomy should be performed with much care, clamps, if used, should be adjusted without traumatism of the viscera, only absorbable sutures should be used for the anastomosis

4 Patients subjected to gastro-enterostomy should be instructed as to a suitable dietary, which should be continued for at least a year In addition, antacids should be given if the gastric analyses seem to warrant their employment

5 Patients should be urged to seek competent advice when pain returns

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ABSTRACT OF DISCUSSION

DR J SHELTON HORSLEY, Richmond, Va Jejunal ulcer following gastro-enterostomy is found in a small but definite percentage of cases It is of course caused by the gastro-enterostomy Without this operation it is almost never found Undoubtedly unusual trauma and the use of unabsorbable sutures favor its occurrence but when catgut is used and no clamps are employed jejunal ulcer sometimes occurs In large clinics it is estimated that it follows gastro enterostomy in about 4 per cent of cases It seems reasonable to assume therefore, that something in the altered physiology of the stomach is responsible for the jejunal ulcer When a hollow viscus has always had alkaline contents and the reaction is changed to strongly acid, symptoms are produced For every jejunal ulcer there are probably many cases of jejunal hyperemia which also produce symptoms In one of my cases in which a gastro-enterostomy was performed, without clamps a perforating jejunal ulcer developed on the mesenteric border opposite the stoma The best results follow gastro-enterostomy when done for complete pyloric stenosis, and the alkalinity of the duodenal contents cannot be lowered by the passage of acid contents through the pylorus So the unreduced alkalinity of the duodenal contents can better protect the jejunal mucosa at the gastro enterostomy opening than if this alkalinity had been reduced by the passage of the gastric juice through the pylorus It is common experience to get the best result in those cases in which there is cicatricial pyloric or duodenal closure in this type gastro-enterostomy should be done In other types pyloroplasty will cure the ulcer and in a few months the stomach will appear to be practically normal even on roentgen-ray examination

DR WILLIAM J MAYO Rochester Minn In our experience gastrojejunal ulcer rarely occurs if fine catgut instead of silk or nonabsorbable sutures are used in performing a gastro-enterostomy This has also been Moynihan's experience Twelve years ago I reported seven cases of these so called marginal ulcers I have seen very few true jejunal ulcers but I have no doubt that they occur They do occur experimentally in animals The ulcers I have seen have almost always been in the suture line In two cases, nonabsorbable sutures worked through the abdominal wall and were removed from superficial abscesses A very narrow layer of tissue should be turned in and one should be very careful about the blood supply It has been my misfortune to reoperate in some cases of gastrojejunal ulcer in which the ulcer had been excised We now cut off the gastrojejunostomy close the stomach and jejunum and make a pyloroplasty after the method of Finney We have seen gastrojejunal ulcer only three times among many hundred gastro-enterostomies in which catgut was used Carman has shown that a roentgen ray diagnosis of gastrojejunal ulcer can be made in more than 90 per cent of the cases Many of the patients coming back after gastro-enterostomy, with supposed relapses of the original ulcer prove on exploration to have gastrojejunal ulcer with the original ulcer healed

DR. A J OCHSNER Chicago The reason Dr Mayo does not get jejunal ulcers following his gastro enterostomies is not that he uses a certain kind of suture but that he makes his gastrojejunal opening at the lowest point of the stomach so that there is no accumulation of acid gastric juice In all the cases in which I have reoperated for jejunal ulcer there was a sacculation of the stomach I have used silk in all my cases and my proportion of jejunal ulcer corresponds to Dr Mayo's because I followed the principles he laid down twenty five years ago

DR A A STRAUSS Chicago When a gastrojejunal ulcer occurs the surgeon has really produced an experimental ulcer The etiologic factors which produced the original ulcer are still present Producing the trauma to the bowel and stomach using silk sutures and cutting off the blood supply by inverting the edges of the bowel and stomach too much furnish the ideal conditions for producing an ulcer experimentally especially when the etiologic factor the infection is still present in the body Experimentally we have found that if an ulcer is produced and a gastro enterostomy is performed later during the very active stage of the ulcer quite frequently a gastrojejunal ulcer is found when silk is used On the other hand when the gastro enterostomy is performed later when the ulcer is practically healed we hardly ever find a gastrojejunal ulcer No matter whether we believe that a certain particular type of streptococcus produces the infection the important clinical fact is that every excised ulcer contains a large number of organisms The trauma of gastro enterostomy plus the original infection produces the gastrojejunal ulcer I doubt whether the acid

2 Van Roojen Arch f klin Chir 91 381 1910

importance of the open method The common duct could have been easily ligated on account of the edema mentioned above making the cystic duct so short as to resemble the common duct, in another case the ampulla of the gallbladder was adherent to the common duct, and until separated from the latter

The hepatic artery must be avoided because our experiments on animals have shown that ligation of this important vessel will result in death

The changes occurring in the liver resemble those of acute yellow atrophy Mention is simply made here of this fact because many obscure deaths follow

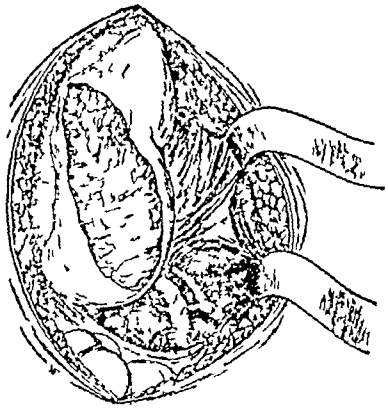

Fig 8—Gallbladder removed, cystic duct ligated close to common duct, cystic artery ligated close to gallbladder

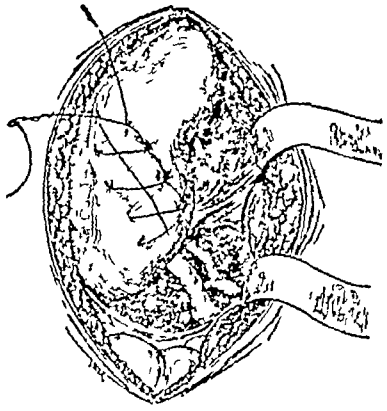

Fig 9—Gallbladder bed brought together with continuous mattress suture

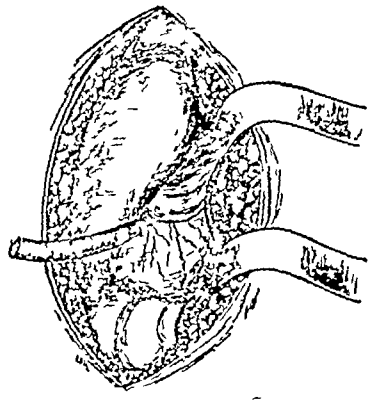

Fig 10—Rubber tube placed near site of operation

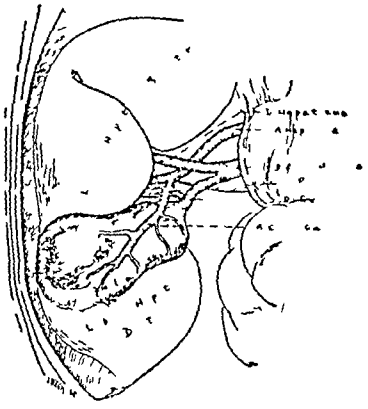

Fig 11—A remarkable cystic artery its size and its numerous branches should be noted

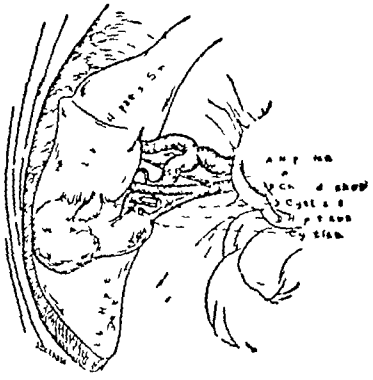

Fig 12—Great caliber of cystic artery

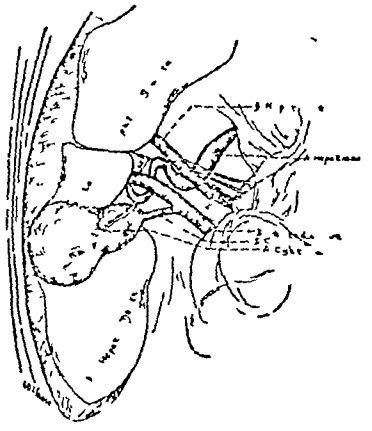

Fig 13—Double hepatic artery, one in close relation to the cystic duct

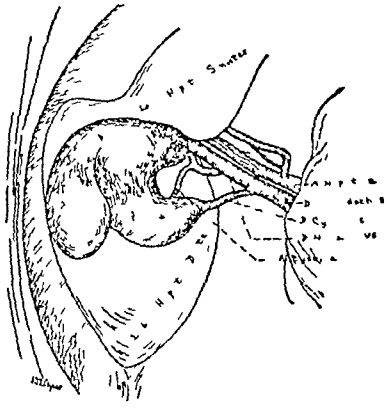

Fig 14—Accessory hepatic arteries

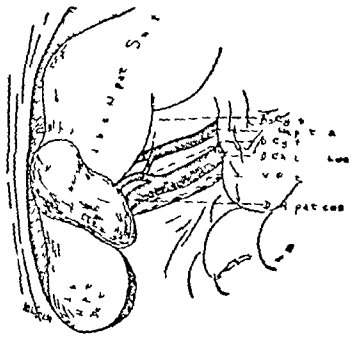

Fig 15—Ventral insertion of cystic duct

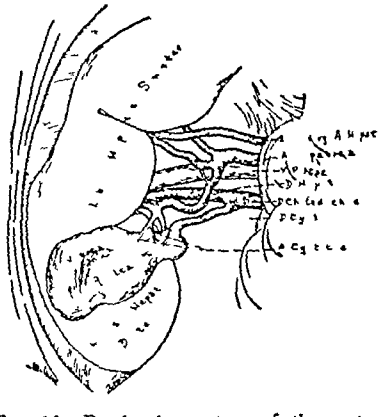

Fig 16—Duodenal insertion of the cystic duct accessory hepatic and cystic arteries

and until the right free border of the gastrohepatic omentum was opened, it was impossible to distinguish the cystic duct from the common duct In still another case the gallbladder was so large and the ampulla extended over such a wide area that the structures around the foramen of Winslow were hidden from view I could cite many more cases to illustrate this point

a supposedly fine technical operation One often hears a report of a case of cholecystectomy in which the patient should not have died, but for some unexplainable reason does so After ligation of the hepatic artery the patient may do, well for a week, when gradually there will be signs of inanition, followed by gradual loss of strength, and finally death Another communication will be made on this subject

after the completion of the experiments Suffice it to say here that this is another plea for the open operation

Recently we encountered at operation a hepatic artery which was in close relation to the cystic duct It curved over the hepatic duct, and dipped down under the hepatic duct to enter the liver The cystic artery was insignificant (Figs 13 and 16) When operation is performed within the omentum in cases of this character, there is often severe hemorrhage because the hemostat does not completely compress the entire circumference of the vessel Then, on account of one's haste in attempting to secure hemostasis, important structures are destroyed

CONCLUSION

It may be stated that the operation of cholecystectomy has lost all of its barriers to a successful result if we perform this operation strictly along anatomic lines The convalescence of these patients is far superior to those of the old operation of cholecystostomy, however, I would admonish those who are not familiar with the points as outlined above to perform cholecystostomies The complications will be less and the mortality will be greatly reduced [9]

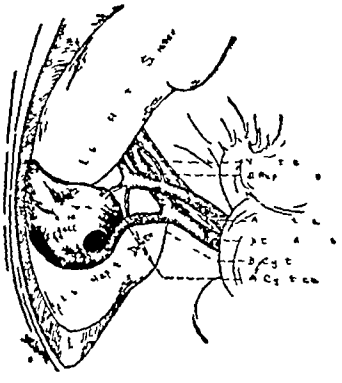

Fig 17 —Accessory cystic arteries Note artery to the hepatic duct Lymph gland shown near insertion of cystic duct enlargement of which may cause obstruction

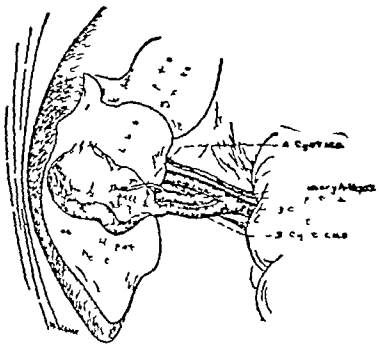

Fig 18 —Accessory hepatic arteries the larger of which runs parallel to the cystic duct

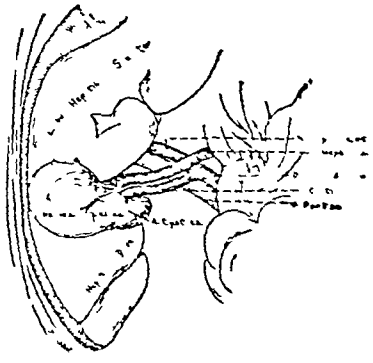

Fig 9 —Hepatic artery running parallel to the cystic duct a dangerous type at operation

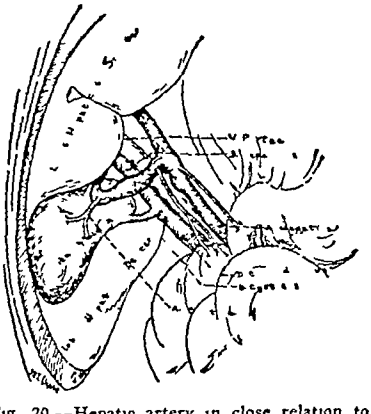

Fig 20 —Hepatic artery in close relation to the cystic duct accessory branches to the stomach and duodenum

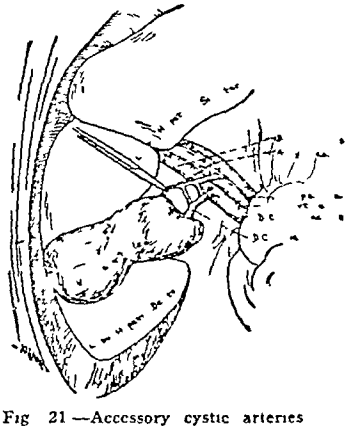

Fig 21 —Accessory cystic arteries

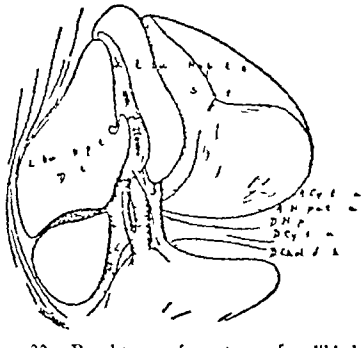

Fig 22 —Peculiar conformation of gallbladder and ducts in their vertical position

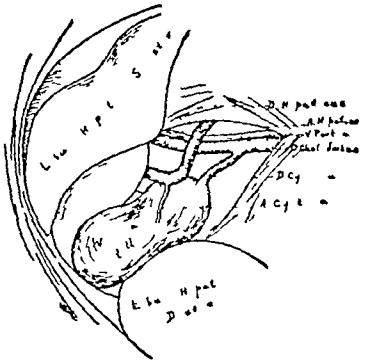

Fig 23 —The hepatic artery courses over the hepatic duct and it is in close relation to the cystic duct and the gallbladder

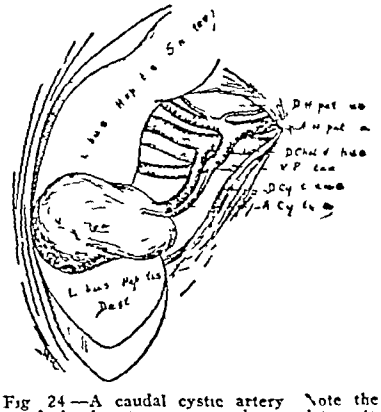

Fig 24 —A caudal cystic artery Note the size of the hepatic artery and its relation to the common duct

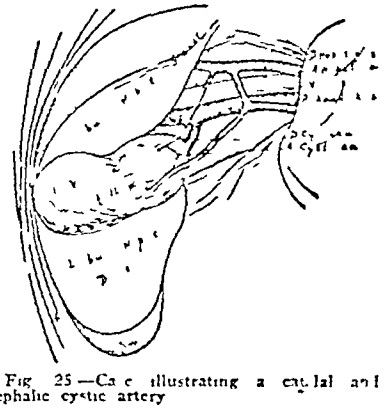

Fig 25 —Case illustrating a caudal and cephalic cystic artery

9 In addition to the references already given the following will be found of interest
Judd E S Surgery of the Gall Bladder and the Biliary Ducts J A M A 71 79 (July 13) 1918
Kleiber A Greifswald 1892

ABSTRACT OF DISCUSSION

DR ALFRED C WOOD, Philadelphia Every operation should be based on anatomic and physiologic considerations The importance of accuracy in surgical work needs no argument, and in this particular Dr Behrend's operation is a definite step in advance Ligating structures *en masse* should be avoided, except when it is absolutely unavoidable I wish to commend particularly Dr Behrend's careful description of the exact manner in which the patient should be placed on the operating table The final result in these cases is usually most satisfactory A clean cholecystectomy is followed by a very rapid convalescence and a very high percentage of permanent cures

DR J B HAEBERLIN, Chicago The crucial point in this operation is good exposure In very fat individuals the best incision is the Bevan incision The cystic duct may be ligated and cut at any point that is normal If it is normal it can be tied one-half inch or 1 inch from its junction with the hepatic duct It is important not to tie the hepatic duct At times the gallbladder has been dilated frequently and collapsed, It is large and sacklike, and close to where the cystic duct comes off is an ear formation In dissecting from above downward bring traction on this pouch or ear formation so that the cystic duc can be reached easily In regard to the treatment of the pain after the gallbladder is taken out Richter of Chicago devised a method in which the peritoneum is laid down not sutured tightly, to allow space underneath and the peritoneum grows to the denuded surface Closing the wound by primary union whenever possible is the ideal method

DR M J SEIFERT, Chicago The essayist advised severing the gallbladder as near to its origin as possible If a cystic stump is left long, it will often develop and take the place of the gallbladder and subsequently gallstones may be found in it

DR JOHN J GILBRIDE, Philadelphia Most of the accidents encountered in surgery whether of the biliary passages or anywhere else, are frequently caused by poor exposure of the parts involved In an ordinary, simple case of cholecystectomy one would not have any difficulty, but in some long standing cases, where the right upper abdomen is a pathologic laboratory one cannot be too careful We are concerned not only with primary recovery, but permanent cure

DR E P QUAIN Bismarck, N D For a number of years I have made the transverse incision for practically all biliary surgery It causes less permanent anatomic damage than any other incision It is anatomically correct It leaves an almost invisible scar The longitudinal incision destroys the intercostal nerves This aids in the formation of hernia and the peritoneum is more likely to invite permanent adhesions than is a normally innervated peritoneum The transverse incision does sever the rectus muscle transversely, but this is of no consequence, the cut ends of the muscle are easily reapproximated, and even when they are not sutured they generally come together from a slight overlap of the aponeurosis and from a physiologic relaxation following trauma The exposure gained by this incision is excellent, the incision being parallel with the common duct and lying over the pylorus The appendix has been removed by me through the same incision in 30 per cent of the transverse incisions made for biliary disease Postoperative hernia has been conspicuous by its absence in more than 600 cases Another point of importance the patients suffer less postoperative pain and distress after a transverse than after a longitudinal incision This is no doubt due to the fact that fewer intercostal nerves have been traumatized in the former than in the latter

DR H M RICHTER, Chicago The multiplicity of anomalies met with by Dr Behrend in 167 sections suggests that they are of little importance or our accidents would be far more numerous That the displacement of the hepatic artery is not frequently followed by its ligation or section is obvious from the absence of necropsy findings The ligation of the cystic duct need not be close to the common duct, the literature to the contrary dealing mainly with the cases in which stones or pieces of gallbladder have been left behind Enlargement of the cystic duct as part of the general enlargement of the duct system is of no importance Its mucous membrane is analogous to that of the ducts and not to that of the gallbladder Neither the cystic duct stump nor the raw surface of the liver should be covered by peritoneum, first, because if infected, the peritoneum will better care for it than the retroperitoneal tissues, second, because it is unnecessary to cover the raw surface, and when the attempt is made the peritoneum is lifted from the raw surface leaving a triangular space behind it The quilting procedure described was attractive, but the gallbladder occupies a depression, and when sutured the little flaps of peritoneum do not lie back against the liver The adhesions following cholecystectomy are due more to the drainage material commonly used than to the raw surface left exposed

DR MOSES BEHREND Philadelphia Dr Wood brought up an important point, that the cystic duct and artery must not be ligated *en masse* Many good operators do this It is a mistake No matter how many kinds of incisions you have, if you follow out this technic and open up the gastrohepatic omentum you will never get into trouble This operation can be done so expeditiously that it takes practically no time, from the first incision to completion of the operation It would be much better for those who are not versed in the anatomy of this region to do a cholecystostomy instead of a cholecystectomy, as it would lessen the frequency of common duct obstruction Drainage is necessary Why subject a patient to a second operation if you can prevent this by putting in a small drainage tube for two or three days? The operation is done from below upward If you do the operation from above downward you get the main bleeding from the liver and it is annoying It will prolong the operation unnecessarily by attempting to eliminate that bleeding It is not necessary to cover the stumps of the cystic artery and duct The only reason the liver is sutured is to get the peritoneum in apposition to prevent adhesions I take issue with Dr Richter that these anomalies are by no means important They are of tremendous importance You have met with cases in which the hepatic or common duct has been destroyed If these variations are borne in mind, injury to the common and hepatic duct can be prevented Accidents are due to the fact that more of these anomalies are not borne in mind when the operation is done

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STUDY OF NUTRITION AND MENTAL DEVELOPMENT IN CHILDHOOD

PRELIMINARY REPORT OF WORK DONE BY THE BOARD OF EDUCATION IN THE PUBLIC SCHOOLS OF CHICAGO

KATHARINE B RICH M D

Staff Physician Norwegian American Hospital, Chicago Visiting Physician St Francis Hospital Evanston Ill Examining Physician and Head of Nutritional Work Chicago Public Schools

EVANSTON, ILL

The increasing cost of living, sending more and more children aged 14 into the ranks of the workers, caused the Employment Certificate Bureau of the Chicago Public Schools, to which the children must apply for working certificates, to make the startling discovery that

1 Fifty-three per cent of the children of 14 applying for employment certificates were from 7 to 21 per cent below the average child of that age

2 These children, when they were employed, could not carry their normal amount of work

3 Because of this they lost their jobs, became discouraged and gravitated into becoming rolling stones, thus easily falling a prey to vicious and criminal companions

All of these children were undernourished Was this the cause and, if so, was it the only cause of their failures?

To determine this, the board of education, through the special interest of Dr Sadie Bay Adair, one of its members, resolved to carry out a number of experiments through the employment certificate bureau to ascertain the effect that direct nutritional work would have on preindustrial children in giving them the requisite bodily fitness for the labor they must perform

The program, as devised, included rest, proper food and direct instruction on health and nutrition so that the children might intelligently cooperate The question immediately arose as to the best methods Previously, nutritional methods used with undernourished children were based chiefly on the correct weight for the height, assuming that cases of underheight came strictly under the range of medical practice or were a matter of nationality The requirements of the employment certificate bureau, however, were such that the work of the board of education had to be based not only on the weight for age but also on the weight and height for age To meet the standard, the child of 14, in order to obtain a working certificate (with a few exceptions), must measure 57⅕ inches in height and weigh 80 pounds

The work was begun about eight months ago in the public schools in the face of many obstacles The attitude of the parents and the apathy of the children was no small factor in the way Questions of cost arose, and objections as to real benefits that would be obtained sprung up in the minds of those who had to bear the financial burden of the undertaking, for supplies had to be procured, cots and blankets for rest periods had to be purchased, milk had to be obtained, help had to be obtained, and the school proposition was doubly difficult because the help and the teaching had to be given first to the children Until parents understood the full significance of the work, they would not cooperate To become heartily in favor they must see some actual results and realize the *wage* value of the child's gain, for in the beginning the child is offered something he does not want, and the parents must be made to see the economic worth of the work to their own pocketbooks

For this reason, five public schools in both foreign and native localities were selected for the experimental work Some interesting and startling facts have been learned with regard to the comparative value of native and foreign diets This will be gone into more fully in our later statistical report of the year's work

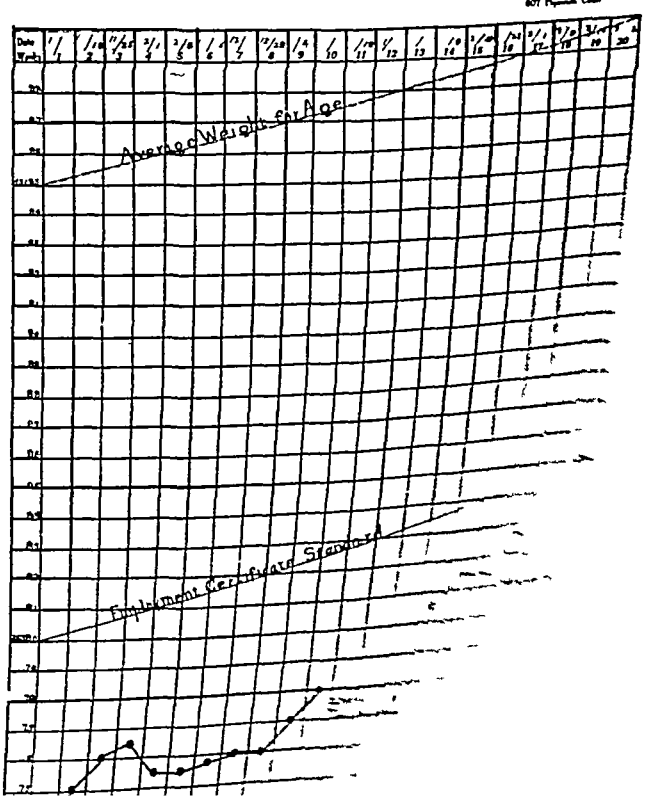
room treated as a unit gained not only the normal weight for a definite period, but 64 per cent over Some children have gained 3½ pounds a week

One of the interesting points this work has brought out is that underweight previously was thought to result largely from bodily defects—diseased tonsils and teeth, adenoids, flatfoot, etc—and hence was strictly a medical question In this work, however, we have found that as the children gain in weight they appreciably gain in height without any medical care whatever Is this because metabolism is bettered, or can the preponderating factor be determined?

Board of Education
City of Chicago

CHICAGO PUBLIC SCHOOLS
NUTRITION CLINIC

Vocational Guidance Bureau
807 Peoples Gas



this way the parents' cooperation in any necessary procedure is ready and willing

It is to the child's best interest not to go to work, but to continue its schooling Undernourishment hinders its best mental effort The economic advantage from this point gained cannot be urged too strongly

The procedure so far tried out has three features

1 A chart has been prepared to meet the needs of both the public schools and the employment certificate bureau This is reproduced in another column It has been formulated in such a way that comparative gains both of height and weight are seen at a glance We believe that this is a distinct advance over methods previously used

2 Postals are sent to the parents each week letting them know the loss or gain in weight The interest this awakens and the friendly rivalry between mothers is shown by the fact that if the cards are not received they are promptly asked for

3 A certificate of graduation (filling the requirements of the employment certificate bureau) is given each child This is signed by the physician in charge the nutritional worker and the principal of the school It is presented with the other papers (birth certificate, etc) to the employment certificate bureau when the child applies for its working certificate This gives it a dignity at once and causes the document to be highly prized

Many children who intend going into high school want to work during the vacation period They cannot do it without a full working certificate It is required just the same as though they were going to work permanently It can be seen that results depend largely on the enthusiasm and loyalty of the nutrition workers We have been particularly fortunate in those we have had help us A knowledge of psychology is necessary also in handling various cases, as the approach must be made from a different angle as they develop One boy who had been especially hard to interest came bashfully up to the physician in charge and standing on one foot and twisting his cap in his hands said

Say dere s a guy over dere dat needs dis work bad He's 20 pounds underweight Can't you let him into de class?

Well you know we have room for only twenty in a class Now if you do your best take your exercises and do as we tell you, you can gain enough to get out of the way and make room for him Will you do it?

Thus stimulated, with a direct object to gain for a "pal," it wasn't long before a proud boy brought up his friend to gain the advantages he himself had obtained from the public school nutrition work

1924 Sherman Avenue

Health Supervision of the Schoolchild — Dr Taliaferro Clark speaking before the American Child Hygiene Association, Nov 11-13 1919 said that the number of cases of malnutrition the number of physical defects and the number of cases of feeblemindedness which are encountered in schools are an index of the thoroughness of the supervision exercised during the age periods previous to entrance into school His conception of school hygiene however is not primarily the detection and correction of remedial defects, but the placing of the normal child in an environment and under such supervision best suited to his complete physical and mental development Any program for school hygiene or health supervision of the schoolchild must take into consideration the physical surroundings of the child, and must place the child in the best possible sanitary environment during the course of its school life It must by reason of the incompleteness of the work done previous to school age provide for the seeking out and correction of the remediable defects which hamper the child and prevent it from taking full advantage of the educational opportunities, but in addition must include measures for preventing the occurrence of defects

CONGENITAL HYPERTROPHIC PYLORIC STENOSIS

REVIEW OF ONE HUNDRED AND SEVENTY-FIVE CASES IN WHICH THE FREDET-RAMMSTEDT OPERATION WAS PERFORMED *

WILLIAM A DOWNES, M D
NEW YORK

Before taking up the subject matter of this paper, I wish to call attention to an error that has crept into the literature involving the question of priority in the use of extramucous pyloroplasty The value of this procedure in the operative treatment of hypertrophic pyloric stenosis was first called to our notice at the Babies' Hospital in 1914, and very shortly afterward it was adopted as the routine operation in these cases Without properly verifying references we attributed the method to Rammstedt, as had been done by other surgeons The mistake was not realized until some years later, when Dr Alanson Weeks of San Francisco called my attention to it After a careful search of the literature, I find that Dr Weeks is correct, and that Fredet,[1] a French surgeon, deserves credit for the essential feature of the operation, that is, longitudinal incision of the serous and muscular coats of the pylorus, thereby liberating, but not opening, the mucous layer This surgeon then converted the longitudinal incision into a transverse one by suturing Two years later, in 1910, Weber[2] of Germany recommended the same procedure, calling it partial pyloroplasty, and stating that after he had performed this operation he found it had been previously employed by Fredet In 1912, Rammstedt[3] called attention to the advantages of Weber's procedure, but advised omission of the transverse suture and suggested leaving the pyloric wound gaping As this modification has been adopted by most surgeons using the extramucous or partial pyloroplastic operation, Rammstedt should receive credit for the suggestion, and the operation styled the Fredet-Rammstedt operation

All patients with hypertrophic pyloric stenosis on whom I have operated, according to the method just mentioned, from 1914 to January, 1920, are included in this report At the Babies' Hospital, 165 operations were performed, at St Luke's four, and the remainder in other hospitals There were thirty deaths in the series, giving a mortality of 17 1 per cent The results, judged purely from a statistical point of view, are disappointing, and yet a study of the records brings out the fact that the mortality in patients coming to operation in four weeks or less from the date of the onset of symptoms was only 8 per cent The rule of classing all deaths in the hospital following operation as operative deaths is strictly adhered to, even though several babies died from two to four weeks after operation, and had apparently made a satisfactory recovery If this rule was generally adopted in recording results, statistics would be of more value Eighteen babies died in collapse in from three to seventy-two hours It is only fair to state that all were in extremely poor condition, and that many of them could easily

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Dufour H and Fredet P Rev de chir **37** 208 1908
2 Weber, W Berl klin Wchnschr **47** 763 1910
3 Rammstedt, C Med klin **8** 1702, 1912 Zentralbl f Chir **40** 3 1913

have been classed as hopeless and operation refused, but as we felt that surgical intervention offered the only chance of recovery, they were given the benefit of the doubt

The average age of this group was nine weeks, with a history of symptoms for more than five weeks The weight averaged 6 pounds—a loss of more than 2 pounds each—amounting in several instances to more than one third of the body weight Postmortem examination was negative in every case Four deaths occurred in from ten to twenty-six days after operation In two instances necropsy disclosed acute gastroenteritis, but in the other two, findings were negative and for want of a better diagnosis they were called marasmus The remaining eight deaths were due to complications, and can be charged, with probably one exception, to bad technic or poor judgment Five of the eight died of general peritonitis in from eight to ten days Two of these deaths occurred early in the series in cases in which the operation was modified by passing a bougie through the pylorus by means of a small opening in the anterior wall of the stomach A third occurred in a case in which the duodenum was accidentally opened, although no evidence of leakage was found at necropsy In the remaining two, no explanation can be offered for the development of peritonitis other than faulty technic

In passing, it might be well to call attention to the fact that peritonitis was not suspected in at least two instances, as the symptoms were not classical, and for this reason one should be guarded in giving the cause of death after operation in infants as collapse, inanition, etc, unless proved by necropsy Hemorrhage was responsible for the death of three of the patients One died in twenty-six hours as a result of bleeding from the pyloric wound, one apparently a true hemophiliac, died on the third day of continuous oozing from the pylorus and abdominal wall, and in the third, with a history of symptoms for twelve weeks, death occurred on the third day following delayed hemorrhage from the abdominal wound While the amount of blood loss was small, no doubt this accident hastened the fatal termination In only one case was there evidence at necropsy to indicate that the operation was inadequate, so far as relieving the obstruction was concerned

The diagnosis of hypertrophic pyloric stenosis is based on the history and physical findings As vomiting, usually forcible in character, is the first sign that attracts attention to the disease, the onset should be considered as dating from the appearance of this symptom Loss of weight, more or less rapid according to the severity of the condition, immediately follows The size and character of the stools vary with the amount of food passed through the pylorus When the abdomen is inspected, visible peristaltic waves situated in the epigastric region and passing from left to right may be seen in practically every case

While waves of this character are observed occasionally in conditions other than hypertrophic pyloric stenosis, in only one of our proved cases of this disease was this physical sign lacking, and for that reason we consider it of great diagnostic value By gentle but deep palpation, the so-called tumor consisting of the hypertrophied circular muscle fibers of the pylorus may be felt to the right and above the umbilicus, or at times high up under the liver or even in the middle line just below the ensiform This tumor varies in size from the terminal phalanx of the little finger to that of the thumb, and gives an almost cartilaginous sensation to the finger even through the abdominal wall

Just before the abdomen is palpated, the stomach should be emptied of gas by the passing of a small catheter, and the abdominal muscles relaxed by allowing the baby to suck water from a bottle during the manipulation If these points are borne in mind, the hard, movable nodule at the pyloric end of the stomach can be felt with little difficulty in nearly every case Occasionally it may be necessary to give a few whiffs of ether or ethyl chlorid to secure satisfactory relaxation of the muscles

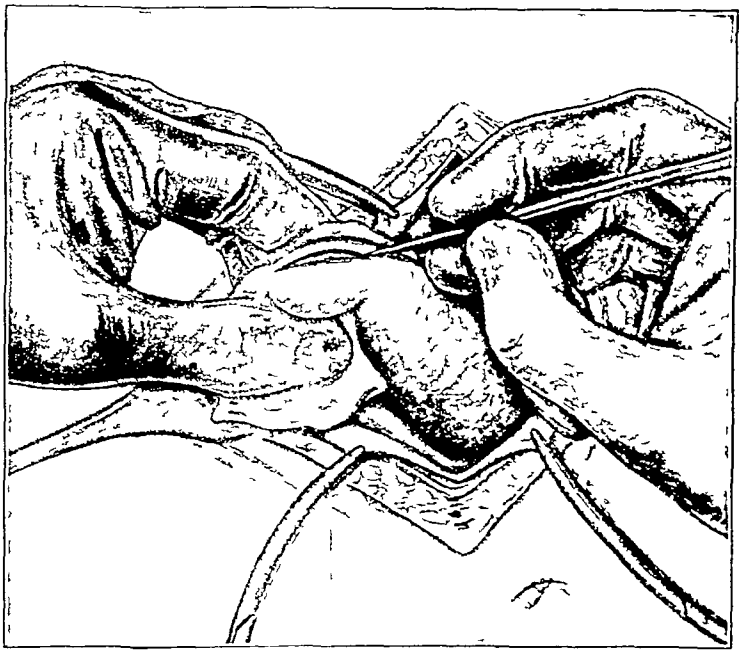


Fig 1.—Line of incision extending through serous coat and superficial fibers of circular muscle

The question of feeling the tumor in these cases has given rise to no end of discussion Undoubtedly, there is a certain knack to the procedure, but if the nodule is once felt distinctly, the chances of recognizing it increase in each succeeding patient examined In only two out of 217 cases (including thirty-one gastroenterostomies) which I observed and in which I operated up to April 1, has the anteoperative diagnosis of a tumor at the pylorus proved incorrect In one of these, a small freely movable right kidney was mistaken for a pyloric tumor, but in the other no satisfactory explanation could be given for the mistake Both occurred some years ago I myself believe that it is extremely important to develop the ability to feel the tumor in these cases, as its presence is conclusive evidence of the disease With this finding along with the usual symptoms of projectile vomiting loss of weight peristaltic waves gastric retention etc the diagnosis has been proved correct in over the 99 per cent of our cases and for th

thought it necessary to resort to the roentgen ray as a means of diagnosis in the average case of pyloric stenosis Many of these babies were admitted to the hospital in such poor condition that immediate operation seemed to offer the only means of saving life Certainly a delay of from four to eight hours or longer for fluoroscopy or roentgenograms was not warranted when the diagnosis could be established with almost absolute precision if the history was correctly taken and a proper physical examination made I know of at least one infant that went into a collapse and died while it was being put through a bismuth series We grant that an occasional vomiting baby is seen in which the history and findings are confusing, when the roentgen ray may be of inestimable value in clearing up the diagnosis

TREATMENT

As suggested by Holt,[4] congenital pyloric stenosis should be considered as occurring in mild and in severe forms The determination as to which of these groups a given case belongs depends on the patient's response to medical treatment If a patient is observed from the onset of symptoms, or if a reliable history can be obtained as to the duration of symptoms, medical treatment is justified for a period of from seven to ten days, provided the baby does not lose more than 20 per cent of its body weight during this time If, at the end of this period, the weight has become stationary and there is a general improvement in the other symptoms, this form of treatment may be continued, always bearing in mind, however, that even though the infant seems to be making satisfactory progress there may be a sudden relapse If so, the case should then be considered as surgical and operation advised If, on the other hand, there is no improvement under medical care, or if the improvement is unsatisfactory in that the baby is better one day and worse the next so that at the end of from a week to ten days the sum total is that the baby is worse, the case belongs to the severe group, and immediate operation is indicated

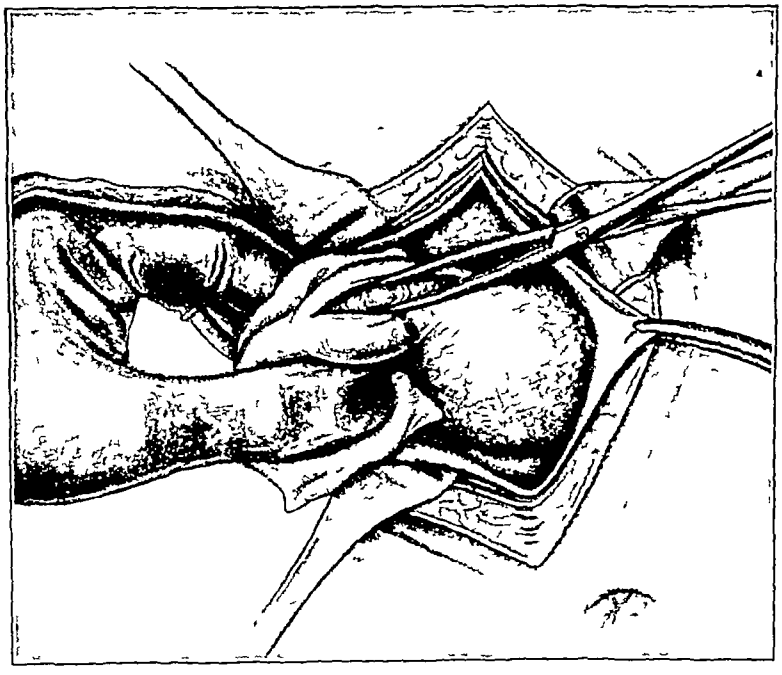


Fig 2—Incision spread with artery clamps mucosa beginning to appear between divided muscle fibers

Considerable experience in the treatment of this disease is necessary in order to acquire the ability to decide with any degree of accuracy in which group a given case should be placed As congenital pyloric stenosis is after all not a very common disease, there is little opportunity for the general practitioner to gain this experience For this reason, any baby with persistent forcible vomiting should be seen by the best available pediatrician at the first possible moment So frequently is the history misleading or inaccurate and the necessary data, such previous weight, lacking that I believe the question of operation should be taken up in every case as soon as the diagnosis is made

As has already been stated, those cases in which it is very evident that the symptoms are of short duration, and the condition of the baby good, observation under medical care is allowable for a short time, although the physician should be prepared to turn the case over to the surgeon should there be the slightest change for the worse Up to the last few years the results following operative treatment of pyloric obstruction in infants were so uncertain that physicians hesitated to recommend this form of treatment, but now that the technic is simplified and the results uniformly good, these objections no longer hold Surely no man could persist in the medical treatment of this condition beyond the point already mentioned as permissible when the mortality is stated by the best observers to be anywhere from 10 to 50 per cent or higher under this form of treatment, and it can be shown that the mortality after operation is a fraction under 2 per cent in selected cases In a study of the cases at the Babies' Hospital, Goldbloom and Spence[5] call attention to the fact that out of fifty-one breast fed babies coming to operation with a weight loss of less than 20 per cent, only one died Strauss[6] reports marvelous results following the operative treatment or hypertrophic stenosis in infants He states that he has operated on 103 unselected patients by a special type of extramucous pyloroplasty with only three deaths—a mortality of less than 3 per cent The diagnosis was made in each case by the fluoroscope, and in no instance was operation refused because of the poor condition of the baby From the increasing number of infants with pyloric stenosis admitted to the Babies' Hospital for operation each year, it would seem that the majority of pediatricians now believe that surgery offers more than medicine in the treatment of this disease

OPERATION

The abdomen is opened through an upper right rectus incision from 1½ to 2 inches in length When the wound is retracted, the stomach is easily recognized, and if the portion of the anterior wall which

4 Holt L E Medical Versus Surgical Treatment of Pyloric Stenosis in Infancy J A M A 62 2014 (June 27) 1914 Hypertrophic Stenosis in Infants ibid 68 1517 (May 26) 1917

5 Goldbloom Alton and Spence R C Prognosis in Operated Cases of Hypertrophic Stenosis of Pylorus Am J Dis Child 19 263 (April) 1920

6 Strauss A A Surgical Clinics of Chicago February 1920 p 93

appears is then picked up with anatomic forceps and gentle traction applied, the pyloric end of the stomach with the tumor is quickly brought into view The tumor is then grasped between the thumb and index finger, and a longitudinal incision varying from 1 to 1¼ inches in length, according to the size of the tumor, is made at about the junction of the upper and middle thirds (Fig 1) This incision should start just proximal to the duodenum and should involve only about one-half the estimated thickness of the muscular layer By gently spreading a pair of small, straight forceps inserted into the center of the incision, the undivided portion of the muscle tears exposing the mucous membrane (Fig 2), and by continuing this blunt dissection the division is carried down along the line of cleavage to the duodenal ring and well up on the stomach The separation of the muscular layer from the mucous layer should be sufficiently complete to permit the mucosa to protrude freely into the wound (Fig 3)

Great care should always be used in spreading the muscle at the duodenal end of the tumor, as the change from the thick-walled pylorus to the normal duodenum with its thin muscular layer is very sudden, and there is great danger of opening the mucous membrane at this point At the proximal end, the tumor gradually merges into the stomach, and there is not so much danger of injuring the mucous layer Complete division of the tumor with the knife should never be attempted As a rule there is little tendency to hemorrhage except in the older babies A small artery at the duodenal end of the incision may require a ligature, or, if this vessel has retracted under the muscular layer, it may be necessary to suture a bit of muscle fiber, easily obtained from the rectus, over the bleeding point (Fig 4) In the babies—aged 10 weeks and over—coming to operation, the tendency to bleed is much greater Besides the artery at the lower angle, there is generally another near the stomach end of the incision In these cases, continuous suture around the margin of the incision, supplemented by a bit of muscle or omentum, may be necessary to control the bleeding I do not believe that it is necessary to attempt to cover the exposed mucosa After the pylorus has been dropped back into the abdomen, the line of incision is again inspected to make sure that all bleeding points have been controlled The abdominal wall is closed in the usual way

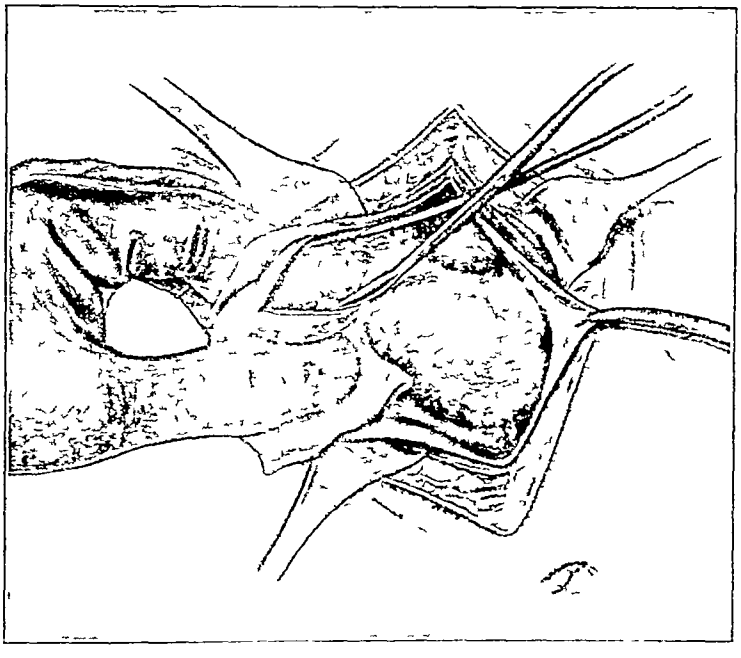


Fig 3.—Muco a protruding freely between cut edges of muscle operation completed

ACCIDENTS AND COMPLICATIONS

The duodenum was opened three times in this series of cases The opening was small in each instance, and was easily closed with fine silk suture reinforced by omentum Two of the patients made a satisfactory recovery, but the third died of peritonitis on the eighth day Careful hemostasis of the abdominal wound is very important Four of our patients lost considerable blood from this source, requiring transfusion in two instances As many of our patients were admitted to the hospital in desperate condition, it was the custom until recently to give a hypodermoclysis of from 150 to 200 c c of salt solution preliminary to operation We now feel that this was a mistake, and that the tendency to bleed was aggravated by this treatment, especially in the older infants Smaller quantities, from 50 to 100 c c of physiologic sodium chlorid or glucose solution given under the skin, beginning from two to four hours after operation and repeated as indicated, is just as efficacious and is a safer procedure Transfusion both before and after operation was resorted to in a number of cases, but did not prove of value except in those in which there had been hemorrhage, and in one case in which a deep seated abscess developed following a clysis Practically all the wounds healed by first intention Sutures are not to be removed before the tenth day Feeding is begun one hour after operation At first, from one to two teaspoonfuls of water, alternated with a similar amount of diluted breast milk, is given and gradually increased until the fifth day, when the child should be receiving almost its normal caloric requirements

The postoperative management of these patients as carried out at the Babies' Hospital was described by Morgan[7] in 1916, and more recently by Goldbloom and Spence Convalescence in the great majority was without special incident Loose stools were perhaps the most frequent complication, and were due either to increasing the food too rapidly or to changing from breast milk to a formula, as is often necessary preliminary to discharge from the hospital Postoperative vomiting is noted as occurring in small amounts or not at all in 107 cases, moderately in twenty-two, and in large amounts in sixteen Of the patients that died, eleven are recorded as having vomited and nineteen as not

The average stay in the hospital of the breast fed babies was fourteen days, and of the bottle fed babies twenty-three days Of the 145 babies discharged as cured, eighty-nine have been seen or heard from in the

7 Morgan F A The Postoperative Management of Pyloric Stenosis Am J Dis Child 11 245 (April) 1916

last two months All are in excellent health, and with few exceptions are above their normal weight Eleven are known to have died from one cause or another over periods varying from a few weeks to eighteen months after operation Forty-five have been lost sight of

We have been fortunate in obtaining necropsies in two cases in which the patient died of pulmonary conditions a year and a half after operation The pyloric tumor had entirely disappeared in both instances, and, with the exception of light omental adhesions at the site of the scar, the pylorus appeared normal in every way

CONCLUSIONS

1 If a satisfactory history can be obtained, and if the findings of a proper physical examination are correctly interpreted, the diagnosis of congenital hypertrophic pyloric stenosis should be made in practically every case

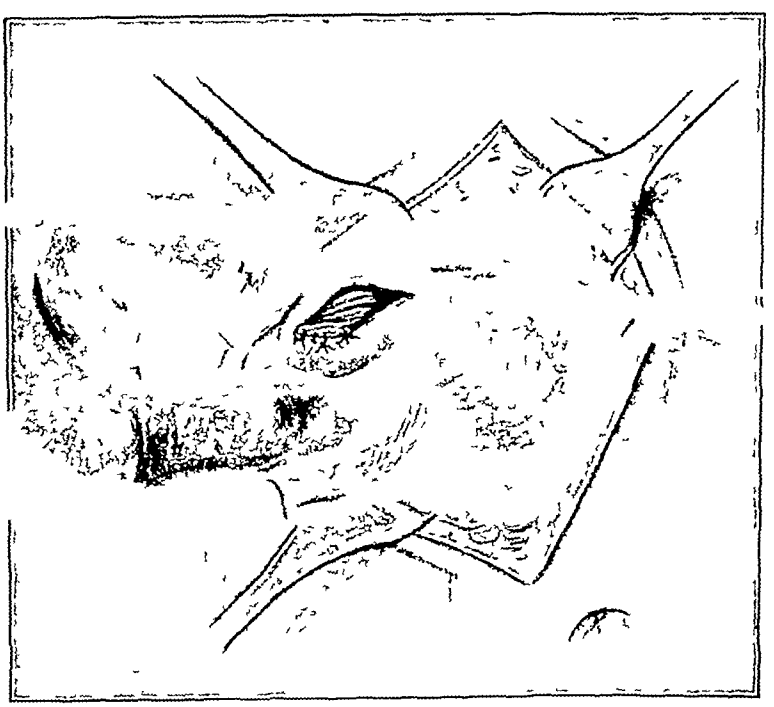


Fig 4.—Bit of muscle fiber used to control bleeding from pyloric artery

2 If the patient is observed from the onset of symptoms, medical treatment may be tried for a period of not longer than ten days, provided the weight loss does not exceed 20 per cent during this time If, at the end of this period, the child does not show definite improvement, operative interference is indicated Any patient, continued under medical care, and suffering a relapse should be operated on at once

3 All cases in which there is a history of a period of ten days or longer in which the data as to previous weight are lacking—and in which the patient is not in very good condition—should immediately be classed as surgical

4 The mortality among patients coming to operation within four weeks from the onset of symptoms is less than 8 per cent

5 The results following the Fredet-Rammstedt operation are permanent and the cure complete

424 Park Avenue.

ABSTRACT OF DISCUSSION

DR DEAN LEWIS, Chicago I have performed twelve gastro-enterostomies for the relief of congenital pyloric stenosis Three of the babies died In one case the gastro-enterostomy perforated, in another the abdominal wall opened on the fifth day, the baby dying from peritonitis, in the third case the baby did not recover, although no definite cause of death could be established All the patients who recovered had a stormy convalescence In the thirteenth case, the condition of the baby was so bad that I did not think it wise to perform a gastro-enterostomy and the operation under discussion was performed This baby recovered rapidly and without any untoward symptoms I have performed four of these operations since this first one The babies have recovered Two other cases in which I operated presented all the symptoms of congenital pyloric stenosis, with the exception of the tumor These patients were operated on but as no tumor was found the abdomen was closed Both babies recovered This operation is simple and can be performed quickly It meets the conditions and I cannot see how it can be improved on The incision should be made through the right rectus muscle and should be carefully closed in layers Opening of the incision has occurred not infrequently when it has been made in the linea alba

DR. ROLAND HILL, St Louis In 1,000 children born in a foundling hospital with which I am connected we found five cases of pyloric stenosis From the increasing number coming in for operation I cannot but believe that the condition has been very generally overlooked, and that physicians are just beginning to recognize it In regard to the method of operating Formerly I did a gastro-enterostomy The babies who were brought in early were in fairly good shape and recovered Then they began to bring in children practically dead and we lost quite a number I did fourteen of these operations One child, a premature baby, weighed 3 pounds 15 ounces I did a gastro-enterostomy The baby recovered and is well today, although seven years have elapsed I have done twenty-two Rammstedt operations Twenty-one patients recovered and one died This baby had suppression of urine for twenty-four hours before it was admitted to the hospital, with convulsions, and a temperature of 103 F This child never urinated after the operation and died of uremia We saved one very sick baby by injecting glucose into the superior longitudinal sinus We have found this to be of value in some of these very bad cases I have had to reopen the abdomen twice In one case it was due to not making the opening larger I made a single incision alongside of the first one and the child recovered In the second case the child had convulsions before being brought in, artificial respiration had to be resorted to before the operation, and still the wound looked fine at the end of the fourth day On the sixth day, while doing artificial respiration, the wound broke open, the child developed obstructive symptoms and we had to reopen the abdomen We found adhesions, released them and the child got well

DR A A STRAUSS, Chicago Too much credit cannot be given Dr Downes for calling attention to the Rammstedt operation Dr Downes brought out that there is a distinct field in the surgery of children and infants I have treated 163 cases of congenital pyloric stenosis, with three deaths I operated in 107, with three deaths The remaining fifty-six patients were treated medically I insist on a roentgen-ray and a fluoroscopic examination in every case Such examinations show definitely not only if there is a congenital pyloric stenosis, but also if the patient should be treated medically or surgically If from 70 to 80 per cent of the bismuth meal goes through within four hours, there will undoubtedly be recovery in that case by medical treatment, irrespective of any clinical symptoms or tumor If less than 70 per cent of

the bismuth goes through, it is an indication for operation A tumor was found in the 107 cases in which I operated The fifty-six babies treated medically recovered, and not a single one returned for operation

If the Rammstedt operation were performed as he described it, the mortality would range from 30 to 50 per cent The Rammstedt procedure does not release the obstruction sufficiently, and for this reason, the patient, following an operation, vomits from three to five days If he is in a moribund condition, this postoperative vomiting is sufficient to cause death The procedure which I devised is a reconstruction of the abnormal condition of the pylorus into a normal one It frees the infolding mucosa and releases the obstruction completely For this reason the moribund infant will not vomit, but will retain its food The mortality rate of my operation is less than 3 per cent I know of one surgeon who has operated in nineteen cases after my method without a death and another, who has operated in twenty-three cases, with one death

DR L T LE WALD, New York I wish to emphasize the frequency of this condition in children and the value of the roentgen ray in diagnosis Of all the gastro-intestinal examinations I have made in the last ten years, I know of no condition in which the diagnosis is so definite.

DR. ARTHUR D BEVAN, Chicago I have been impressed by the importance of doing all these operations under local anesthesia I would go so far as to say that congenital pyloric stenosis should under no circumstances be done under a general anesthetic. The Rammstedt operation is so much easier, so much safer that it has revolutionized the whole subject Whenever the choice lies between ether anesthesia and a gastro-enterostomy and local anesthesia and the Rammstedt operation, one should not hesitate to choose the latter I would like to put myself on record as saying to the surgeons of the country that under no circumstances should a case of congenital pyloric stenosis be operated under a general anesthetic It can be done better and with absolute safety under local anesthesia

DR. J L RANSOHOFF, Cincinnati The Rammstedt operation has the appeal of complete simplicity and absolute efficiency It is to my mind one of the most perfect operations devised in surgery and all modifications are unnecessary I did the gastro-enterostomy before the Rammstedt operation and several Rammstedt operations since I had one death This was due to the opening of the duodenum, a very unpleasant complication I should like Dr Downes to tell us his exact maneuver in closing these wounds of the duodenum I had the opportunity of making a postmortem examination of a child six months after a successful Rammstedt operation This child died suddenly of enlarged thymus The necropsy revealed a perfect pylorus without a trace of tumor There was a linear scar at the site of the old incision, no adhesions and the scar was completely covered with peritoneum Subsequently, in another case where I had done a Rammstedt operation, the mother heard of the result in the case of the child that died of enlarged thymus and became very much alarmed She brought the child to me and a roentgenogram showed an enlarged thymus Dr Palmer, of Cincinnati, among twenty cases has found five cases of enlarged thymus

DR. W A DOWNES, New York I do not subscribe to the views expressed by Dr Bevan regarding the use of local anesthesia in these cases I have tried it in various cases without very satisfactory results It is important not to allow the stomach to extrude and not to let the intestine to come out into the wound, and with a child struggling and crying, as it would with local anesthesia, I do not see how this could be prevented I always use ether, never chloroform I cannot make a statement regarding the frequency of enlarged thymus in these cases

Confidence in the Physician—One of the chief efforts of the physician is to establish a feeling of confidence in the patient and in the family and to relieve anxiety The success of this effort depends largely on personality but consciousness of real knowledge is a most important factor contributing to such an inspiring personal relationship—*Rufus Cole, Science* April 2, 1920

HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY FOLLOWING LUNG ABSCESS

FURTHER NOTES ON A PREVIOUSLY REPORTED CASE *

ETHAN FLAGG BUTLER M D
Major M C U S Army
NEW YORK

The more important points in the history of this patient prior to his transfer from the base hospital at Fort Sam Houston, Texas, to the Walter Reed General Hospital, as given a year ago by Erdman,[1] were

B M W., aged 24, a first lieutenant, Flying Detachment Air Service presented a negative family history except for glycosuria in the father The past history was negative There was no venereal history At the time of his commission in the army, the patient was a student at the University of Pennsylvania and had shown average ability as a student There had been no respiratory tract infection prior to the present illness The patient had tonsillitis in December, 1917 Tonsillectomy under general anesthesia was performed in January, 1918 Within a few days he developed a 'cough and later 'pleurisy," and was on sick report for about two months In May, 1918, he reported at Kelly Field, for instruction in aviation May 29 1918, he crashed from 700 feet and was badly bruised and shaken up but no fractures resulted, and he was in the hospital only three or four days However, his cough returned, and he was given sick leave During this leave he first noticed a change in the contour of the extremities—a painless swelling first of the knee joints and later of all the joints of the extremities and particularly of the hands and feet In August 1918, the patient was admitted to the hospital for observation The following month a lung abscess was diagnosed and drained by a two-stage operation The abscess was in the lower left lobe A culture showed the presence of *Staphylococcus albus* and a typhosus-like bacillus On account of the situation of the abscess surgical solution of chlorinated soda could not be used Vaccines were prepared but their use was followed by no demonstrable benefit Following drainage there was slight improvement in the condition of the extremities, but if for any reason free drainage was interrupted there was an increase in the swelling and more pronounced discomfort

Fig 1—General appearance of patient five months after operation (to be compared with corresponding picture in Erdman's original report)

Insomnia and irritability had been present for some time but not until November 1918 following the armistice did pronounced mental symptoms appear The patient himself has attributed them to disappointment in failing to go overseas and to the realization that the war had come to an end and

* From the Surgical Service of the Walter Reed General Hospital Washington D C

1 Erdman Seward Hypertrophic Pulmonary Osteo-Arthropathy (Bamberger Marie Dilaeve) J A M A 73 259 (July 26) 1919

that all he had to show for his service was a "wound in the side from which corruption poured" At all events, he became much depressed, introspective and apparently on the verge of a psychosis

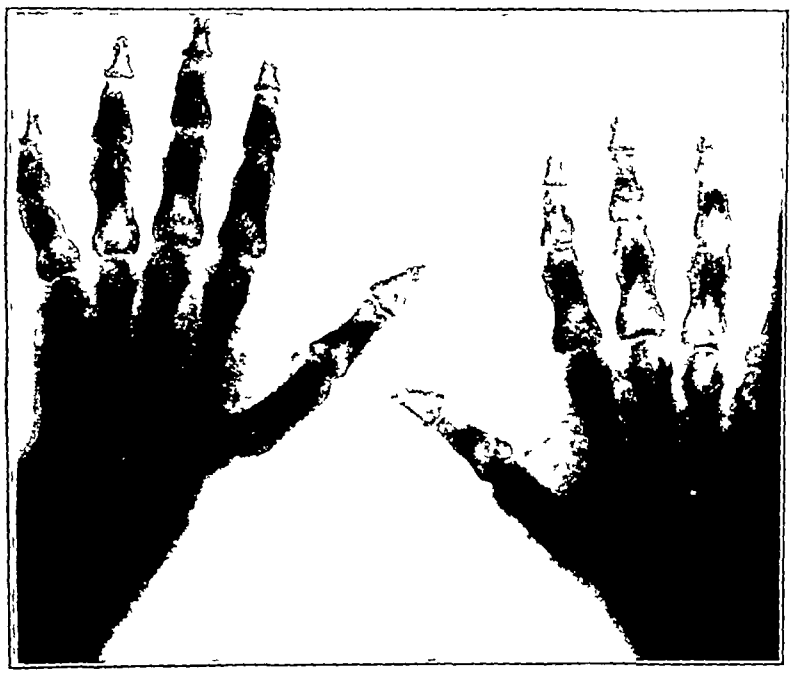


Fig 2 —Hands at time of admission

Erdman thus summarized the course, up to the time of transfer

Summary—There was an involvement of the left lung, probably the effect of an aspiration infection following tonsillectomy under ether There was a chronic productive cough There was a rapid enlargement of the feet and hands during a period of six months A lung abscess was drained, September 1918, with a resulting persistent bronchial fistula Mental depression and insomnia were present There was a slight loss of weight There was no evidence of syphilis or tuberculosis The pathologic condition in the enlarged hands and feet and other regions is best revealed by the roentgenograms, which show, besides the enlargement of the overlying soft parts, a definite striated production of new bone in the periosteum of the shafts of the metacarpals and the first two rows of the phalanges, also along the lower ends of the radius and ulna The corresponding bones of the lower end of the femur, also the clavicles and some of the ribs are to a degree affected The joint surfaces appear unaffected There is fluid in the knee joints

Negative Findings—The fingers are not "clubbed" No pituitary or thyroid changes are present There are no headaches, disturbance of vision nor drowsiness, on the contrary, very marked insomnia There are no changes in face, lips or skull There is no evidence of abnormal thirst or hunger, and there are no alterations in the special senses

FURTHER COURSE

At the time of his admission to the Walter Reed General Hospital, March 28, 1919, the patient presented the following picture

There was a bronchial fistula in the left posterior chest wall, opening through a sinus of 4 or 5 mm diameter, at the level of the eighth rib This sinus tract was 9 cm long, and at the bottom it was possible to see, by endoscope, a defect in a bronchial wall This was an opening of 2 or 3 mm diameter, apparently the only such opening A hemolytic strain of staphylococcus was obtained by culture, but the intensity of the infection was so slight that but one organism could be found in ten microscopic fields by direct smear

The patient also presented a symmetrical enlargement of the extremities, as has been adequately described in the original report by Erdman It should again be emphasized that this enlargement was not limited to the distal phalanges, as in the typical "clubbed fingers" so often found in these cases, but involved the whole hand and foot, as well as distal halves of the forearm and legs Furthermore, the enlargement was not similar to the changes noted in acromegaly, in that the length of the members was not increased, but only the circumferential measurement At no time during his stay at Walter Reed did the patient show any fluid in any joint cavity That had apparently disappeared completely, following the original drainage of the lung abscess There was diminution in the strength of muscles of the extremities There was restriction of motion in all the joints There was difficulty in performing fine movements, not on account of any loss of nerve function, for none such was demonstrable, but on account of the unwieldy members themselves The gait was waddling, he required assistance in dressing

Roentgen-ray examination showed the bony changes to consist of marked irregular periosteal proliferation, apparently limited to the diaphyses, and an osteoporosis, which may have been either a disuse atrophy or a pathologic process primarily The joint surfaces were not involved There was no evidence of pathologic change in the epiphyseal lines Limitation of joint motion was due to changes in the shafts of the bones, rather than to changes in the joints themselves There was a brawny infiltration of the soft tissues

Mentally, the patient seemed to be on the verge of a psychosis He appeared unable to obtain sufficient rest. He was depressed, irritable and introspective There were no definite delusions, and no hallucinations He required close watching to prevent him from performing such pranks as one might reasonably expect from a mischievous boy of 6 or 7 There was no attempt at injury to himself or others

The mental condition required the first consideration Rest, reassurance, and the diversions of occupational therapy gradually produced a marked improvement in that element of his syndrome Throughout this period he also received treatment in the department of physiotherapy for the osteo-arthropathic condition Such treatment included, at various times, massage, baking, diathermy, whirlpool baths and hot cabinet baths On account of the irritability and restlessness of the patient, frequent changes had to be made in this course of treatment There was slight improvement in his general well being but no demonstrable change in the bony parts, so long as the fistula remained open

Fig 3 —Final appearance of right hand

In May, 1919, it was possible to attempt a closure of the bronchial fistula Fulguration of the entire tract by high frequency sparks was done in the hope that complete destruction of any epithelial lining and subsequent cicatrization would obliterate the

fistula Three such attempts were made without inconvenience to the patient The net result was to decrease the caliber of the tract, but the fistula remained

Fig 4—Chest during attack of influenza in January 1920 showing involvement on the right side

August 19, Lieut-Col Carl Eggers and I closed the fistula by operation Approach to the chest wall was by a posterior linear incision at the level of and parallel to the ninth rib The fibers of the latissimus dorsi were cut transversely, and the chest wall proper exposed The sinus tract was naturally excluded in this incision Subperiosteally from 5 to 10 cm of the eighth, ninth and tenth ribs were resected, and then the remaining structures of the chest wall, intercostal muscles, nerves and vessels, as well as the periosteal sheathes, were removed *en masse*, the fistulous tract, so much of it as lay in the chest wall, coming away with this mass The old adhesions still held the lung to the chest wall These were gently loosened at the edge of the defect, care being taken, however not to reach the general pleural cavity, but merely to give the lung slightly more mobility than it formerly had had The dense scar tissue surrounding the fistulous tract at its point of entry into the lung was dissected free, allowing collapse of the mouth of the fistula, and then this mouth was touched with the actual cautery lightly The wound was closed by suturing the divided latissimus over the chest wall defect, and tightly closing the skin except for one rubber tissue drain leading down to the lung surface at a point remote from the fistulous opening The entire operation was performed under local anesthesia (1 per cent procain) and was well borne by the patient

Recovery was rapid and uneventful In two days, all drainage was removed There was a slight serous discharge for a few days, otherwise primary healing of the wound was uninterrupted All dressings were discarded at the end of three weeks

From that time the wound has remained healed there has been no cough and no sputum, and repeated physical and roentgen-ray examinations have failed to reveal any intrapulmonary trouble It is of special interest to note that in January, 1920, while the patient was still under observation, he developed influenza and an extremely light bronchopneumonia, which involved only the right lower lobe, leaving the left side of the chest, the side of the previous trouble, entirely free

Examination made in February, 1920, prior to the discharge of the patient, revealed slight asymmetry of the chest, the left side being smaller than the right, slight diminution in the expansion of the left side, the presence of a linear scar, firmly healed on the posterior chest wall, at the level of the ninth rib vocal fremitus well transmitted over the right, but diminished over the entire left, percussion note resonant over the entire right and the left front, but slightly impaired over the left back and axilla, marked dulness commencing 2 cm below the inner end of the scar and 1 cm below the outer end of the scar breath sounds normal over the right but expiration slightly prolonged over the left front and axilla, distant over the left back, except for the area of the defect in the chest wall where they were near and intensified, and in quality suggesting amphoric breathing, without being frankly so, voice sounds loudly transmitted over the area of the defect, and higher pitched on the left than on the right, whispered sounds very loudly and plainly transmitted over the area of the defect elsewhere there being no change between the left and right sides

Fig 5—Final appearance of left elbow

Fig 6—Final appearance of left foot.

Roentgen-ray examination of the chest detected nothing of significance on the right On the left there was slight pleural thickening at the level of the fourth to the seventh rib, axillary region, the diaphragm line was smooth, the costophrenic angle was more shallow than on the opposite side

Immediately after the closure of the bronchial fistula there was noticeable improvement in the osteo-arthopathic condition Resorption of the periosteal proliferation commenced first, and most marked, in the phalanges, later, and less marked, in the long bones of the extremities At the same time there was an increased deposit of lime salts throughout the shafts of the bones, and the old picture of osteoporosis was no longer as marked, in the roentgenograms Soft tissue infiltration disappeared concurrently with the improvement in the bony condition The range of motion at the joints increased Throughout this period the patient continued to receive the benefits of active treatment in the department of physiotherapy, but also he undertook many more outdoor activities and indulged in normal exercise The improvement in the bone cortex and in the soft parts was probably influenced greatly by the latter factor

Mentally there was also marked improvement With the freedom from dressing attention, he became more cheerful With the improvement in the condition of the extremities he developed more self-confidence However, there remained periods of depression, and he continued to be introspective and apprehensive lest other misfortunes might befall him

COMMENT

It is fair to consider that the general outlook for this patient is good No further trouble should be anticipated from the old lung abscess The influenza in January, 1920, was a severe test There will probably be always a residual chronic periostitis Eventually complete recovery from all neurotic symptoms should take place

The case is of particular interest in reference to the improvement in the osteo-arthropathic condition that followed the elimination of the focus of infection in the lung It may serve as a plea for early definitive surgical action in similar cases

345 West Fiftieth Street

ACCESSORY SINUS DISEASE AND CHOKED DISK*

HARVEY CUSHING, M D
BOSTON

A number of papers have recently appeared in our journals on the relation of visual disturbances to inflammation of the ethmoidal and sphenoidal cells The matter has finally come to the attention of the general profession as well as to those whose chief interests lie in the province of rhinology So many unhappy consequences of indiscriminate and ill-advised operations on the accessory sinuses have come to our attention in this clinic that I feel more or less obligated to express an opinion on the matter If harm, as I believe, is actually being done to patients by lack of understanding of these conditions, unless we set ourselves straight concerning them harm will certainly come to surgical rhinology, and this we all wish to avoid

There can be no doubt but that suppurative inflammations of the ethmoid or of the sphenoidal cells may in certain cases lead to inflammatory changes of adjacent nerves We are sufficiently familiar with this in the case of the neuralgias which accompany suppurative infections of the frontal or maxillary sinuses Much has been written, too, in regard to similar extensions of infective processes to Meckel's ganglion, producing the so-called nasal neuralgia, regarding the prevalence of which, however, I have ventured to express doubts However, it is perfectly conceivable that suppurative processes in the ethmoid cells adjacent to the optic foramina may set up similar disturbances in the optic nerves But what is inconceivable is that these processes should produce choked disk

It is important to bear in mind that what by common usage is referred to as choked disk (Stauungspapilla, papilledema) is a condition brought about by mechanical causes, and that optic neuritis, papillitis and other similar terms are misnomers for this condition Inflammatory processes may affect the optic nerve in such a way as to produce reddening, injection and possibly such a degree of hyperemia and vascularity of the nerve head as to resemble the early hyperemic stage of a choked disk, but it is unbelievable that an infection of the accessory nasal sinuses in the absence of increased intracranial tension should produce an actual choked disk On the part of the rhinologists, the statements which accompany their papers are extraordinarily unconvincing I may give a few quotations from a recent number of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

> Its pathology [hyperplasia] has always seemed to me rather obscure Many specimens have been sent to the laboratory but nothing of interest has been discovered I had high hopes of getting some valuable information but the report as usual was negative
>
> It would probably be difficult to find an adult individual in a temperate climate who does not present an example of this bone change within his nasal chambers which I have a right to call pathologic It is only exceptionally that the symptoms to which it gives rise are sufficient to cause him to seek relief it is readily seen that many of these cases have a condition so elusive as to be difficult of detection, either microscopically or macroscopically In looking into these noses one is disappointed in not finding much, if anything, pathologic.
>
> It is always a disappointment to the ophthalmologist when pus cannot be found and the roentgenograms are negative It is difficult to convince some that there is such a thing as hyperplasia, but case after case has demonstrated that *pressure sufficient to cause atrophy of the nerve* [italics mine] can take place in a nose that on both inspection and roentgen-ray examinations showed practically nothing abnormal
>
> While it is a source of satisfaction to operate on patients with a marked nasal pathologic condition, nevertheless one should realize that unless some definite explanation for the loss of vision can be found elsewhere, its most probable origin is in the sinuses The diagnosis of accessory sinus disease in cases of practically negative nasal findings is largely made by exclusion
>
> It is well known that cases of blindness from accessory sinus disease recover spontaneously Four of my patients have told of previous attacks in which the eyes were blurry for two or three days and the vision defective, but from which they recovered without treatment
>
> Thus the demand for early operative interference in the cases of total loss of vision is much more imperative than when the loss is but partial It would seem the wiser course here to err on the side of advising operation too soon and possibly unnecessarily than to risk a patient becoming permanently blind through delay

It may be unfair to take random paragraphs from a well-intentioned paper, but I cannot conceive of a feebler argument on which to base the widespread advocacy of so serious an operative procedure as

* From the Peter Bent Brigham Hospital

one in the upper nasal region That these operations must be frequently performed I am led to believe by the articles I have seen That they frequently meet with disaster in the hands of the inexpert I am convinced by the fact that I am often urged to see patients in consultation who are in extremis from meningitis following what was supposed to be a trifling intranasal operation

Now I may say further, in connection with these papers, that there is great confusion (1) in citations from the literature, many of which antedate our knowledge of the mechanical factors producing optic atrophy and choked disk, (2) in the variety of lesions considered which vary from the obscure hyperplasia mentioned above to actual suppurative process or even sphenoidal tumors, (3) in that these intranasal procedures of exenteration of the ethmoid cells, removal of the middle turbinate, or opening of the sphenoidal cells are supposed to relieve or forestall a great variety of processes variously described as retrobulbar neuritis, neuroretinitis, optic neuritis, papillitis and optic atrophy

I confess to a lack of understanding of the causation of certain types of amaurosis which are often attributed to retrobulbar neuritis, but there are so many well recognized neurologic lesions that many produce conditions indistinguishable from them that I have some misgivings when the former diagnosis has to be made These things, however, are out of my province But when a retrobulbar neuritis is said to be accompanied by 2 or 3 diopters of swelling we are certainly dealing with something which a hyperplasia of the mucous membrane lining the accessory sinuses is not capable of producing During the course of the last twelve months many patients with brain tumor have appeared in the Brigham Hospital clinic who had recently undergone radical intranasal operations for assumed infections of sinuses Were the operations done merely on the chance that the patient complained of obscure headaches or visual disturbance in the absence of choked disk, it would be understandable, but when these operations are performed on people with full-blown changes in the optic nerves and with an idea that cleaning out the ethmoid and sphenoidal regions might check the process, we have certainly gone too far

Fig 1—Rear view of the skeleton of a foot resting on a mirror to show the arc of the under surface of the os calcis and its small bearing area

Early Diagnosis of Tuberculosis—Visualization by the roentgen ray probably gives us a clearer idea of the character and extent of lesions in the lung than any other single method of examination except postmortem examination It is not particularly desirable however, nor is it conducive to good work in diagnosis to limit ourselves to one method of examination The isolation of the roentgenologist in his laboratory is no more to be justified than would be limiting one examiner to auscultation and another to percussion It is only by the most careful correlation of the results of the physical roentgen and laboratory findings, with the history and temperature record that we can hope to attain the maximum efficiency in early correct diagnosis—A W Erskine, *J Iowa State M S* April 1920

PREVENTION AND TREATMENT OF WEAKFOOT IN CHILDREN

PERCY WILLARD ROBERTS, M D
NEW YORK

About five years ago I called attention to a fundamental principle concerning the production and correction of weakfoot which had not been previously recognized It was demonstrated at that time that rotation of the os calcis on its anteroposterior axis controls the degree of strain which the longitudinal arch is called on to bear, and that by directing the course of such rotation outward, foot strain may be prevented and weakfoot overcome During the interval that has elapsed, the theory has been put to extensive clinical tests which have proved its soundness and made clear its value in preventive work when applied to children's feet

The old adage, "as the twig is bent the tree is inclined," aptly applies to the child's foot If through mechanical support and muscle training its balance is maintained through the period of growth, there will result a normal foot, architecturally correct and muscularly strong enough to meet all the demands that may be made on it in the years to come As foot troubles in adult life have their origin many times in improper development of the pedal tissues in early childhood, it is evident that the subject under discussion is one deserving of more consideration than it usually receives

At the end of the first year of life, when the baby begins to stand, the bones of the feet are hardly more than an orderly arrangement of cartilaginous masses Centers of ossification are present in the astragalus, os calcis and cuboid at this time, but they do not appear in the other bones of the tarsus until from one to three years later It will be apparent, therefore, that these structures are in a condition to be profoundly influenced by the stress and pressure that may be brought to bear on them They will grow into perfect or imperfect bones as circumstances may ordain, hence the wisdom of experienced supervision of the child's foot throughout this important period of development

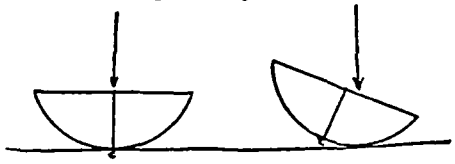


Fig 2—Diagram illustrating the cause of rotation of the os calcis in weakfoot When the thrust of the body weight comes over the center of balance the bone remains upright Slight deviation of the point of thrust produces tilting

There are three factors commonly at work to disturb the fulfilment of Nature's plan for the formation of the foot, namely, improperly designed shoes, unequally developed leg muscles, and a deviation in the normal mechanical relations between the tarsus and the leg The importance of the last of these will be apparent on examination of the simple basic principles underlying the attitude of pronation As will be seen by referring to Figure 1, the bottom of the os calcis is approximately an arc, and the weight of the body is resting on a single point, representing the center of balance of this bone So long as the thrust of the body weight is carried directly over the center of balance, the bone will not tilt, but if it is shifted let us say to the medial side the bone will rotate inward (Fig 2)

The ligaments on the bottom of the foot bind the os calcis and the bones anterior to it so firmly together that they must move as one mass Therefore inward tilting of the heel bone will lower the inner border of

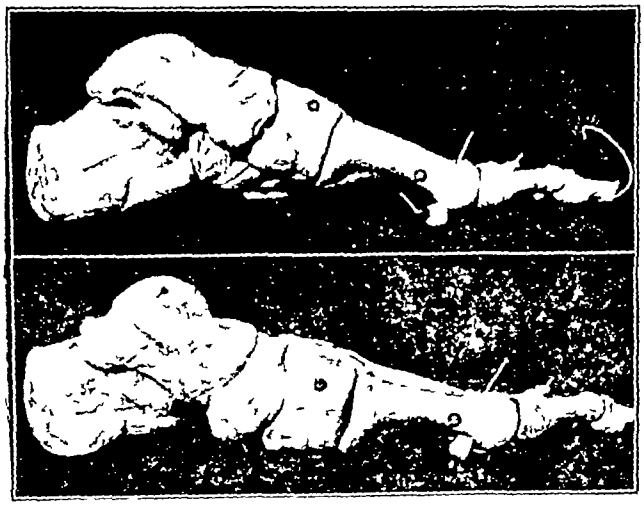


Fig 3—Above normal position of tarsal bones below depression of the arch by rotation of the os calcis on its long axis

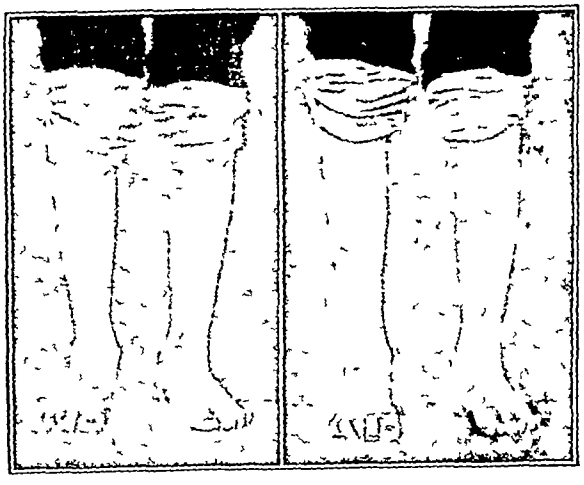


Fig 4—Left moderate weakfoot right correction of inward bulging of the internal border of the right foot by rotation of the os calcis

the foot, as shown in Figures 3 and 4, and pronation becomes an established fact with the consequent evil of strain on the ligaments of the longitudinal arch The result of long-continued strain of this nature will ordinarily be stretching of these ligaments and the production of weakfoot The prevention of this fault in attitude is easily possible if the young foot is properly trained Perhaps the most important single factor in the development of a normal arch is the maintenance of the upright position of the os calcis during the period of growth In some cases it is necessary only to raise the inner border of the heel of the shoe to insure this result In others, some firm mechanical appliance capable of grasping the heel, such as the plate to be described later, will be indicated *It is the* custom of the day, when a child has weakfoot, to put in the shoe a plate which presses up the arch In the light of my experience this would seem to be both physiologically and mechanically wrong—physiologically wrong because constant pressure on the plantar tissues interferes with their development, and mechanically improper because the force is inefficiently applied The desired correction can be much more readily obtained by an apparatus whose effective force is applied directly to the heel, and the permanence of the results will be more certain

Much can be done toward maintaining the proper alinement of the bones of the foot by muscle training, but the use of this measure must of course be deferred until such time as the child is old enough to cooperate intelligently, therefore the question of shoes takes second place in any reasonable scheme of prophylactic supervision of foot growth While it may be profitless to discuss the relationship between present day foot troubles and the civilized custom of shoe wearing, it must be admitted that if the foot of the savage is normal, then our own are anatomically distorted, and the natural inference is that shoes are responsible This is very likely true, for we have seen that the bones of the infant foot are soft structures readily influenced by continuous compression, and we know that long before the baby has any inclination to stand, his feet are encased in leather coverings which, in the nature of things, must affect their development From that time onward the foot, when in use, is always subject to the restriction of movement imposed on it by a shoe To avoid undue distortion it is necessary, therefore, to select children's footwear with an intelligent understanding of the needs of the growing foot.

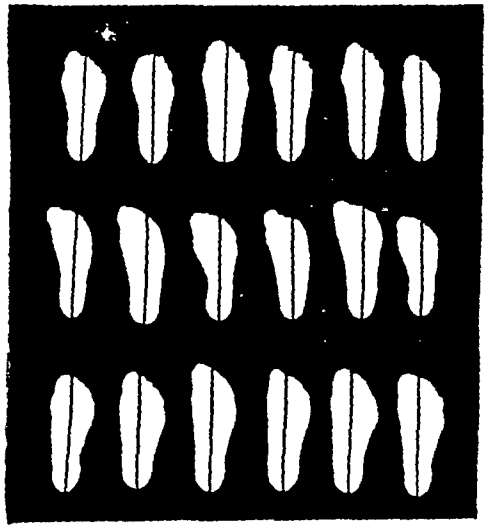


Fig 5—The three types of normal feet described by the American Posture League upper row, straight feet middle row inflared feet, lower row outflared feet

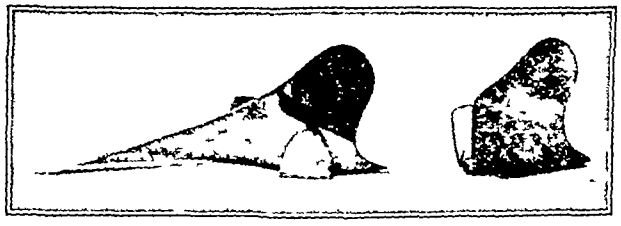


Fig 6—Roberts plates The small plate which was used with success in about fifty cases and proved the theory of arch control by rotation of the os calcis extends forward only to the anterior border of the os calcis

During the first ten or twelve years of life, the foot should have ample room to expand laterally as well as to grow in length To meet this condition, a proper shoe may be described as one which is sufficiently wide

at the ball of the foot to avoid crowding the heads of the metatarsals together when the wearer is standing, and in which the inner and outer borders of the sole maintain a straight line well beyond the great and little toes The popular idea that the anterior part of a shoe should swing inward, a design so often seen in so-called "orthopedic" lasts, is based on an entirely erroneous conception of the normal foot This fact seems proved by an investigation carried on by one of the technical committees of the American Posture League which collected about two thousand tracings of normal feet from various parts of this country, Japan and India, among which were many outlines of feet that had never worn shoes Careful examination of these by means of a geometric scale revealed the fact that there exist three distinct types of feet (Fig 5) and not merely one, as we formerly supposed The first has been designated as a "straight foot," because a line bisecting the heel and extended forward divides the anterior part of the foot about evenly *The term* "inflared" has been applied to another type in which the anterior half of the foot appears to swing inward, conforming to the shape of the conventional orthopedic shoe In the third type, called "outflared," that part of the ball of the foot on the outer side of the bisecting line is much wider than that on the inner side Unfortunately, there is no record of a similar study of children's feet, and until scientific data are available we must be content to treat the child's foot on more general principles when it comes to the selection of shoes, bearing in mind that compression of either the outer or the inner borders of the feet is to be avoided

Fig 7—Left, severe flatfoot, right correction obtained by standing on the plates This correction is naturally much greater when the foot and the plate are held together by a shoe Note the effect on the Achilles tendon

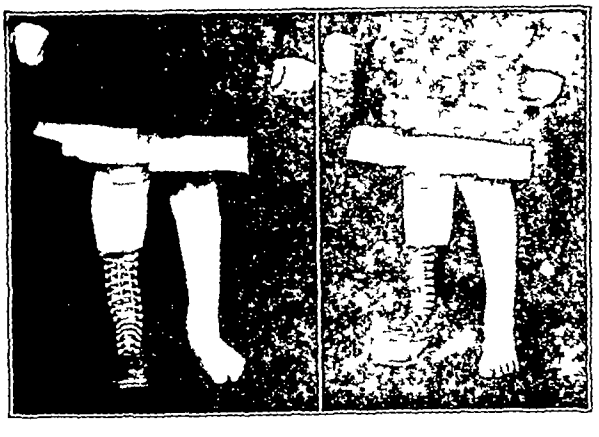


Fig 8—A case of paralytic valgus left standing without plate right standing on short heel plate

Although definite muscle training cannot be carried out effectively at an early age, something can be accomplished by teaching the child to walk on its toes and by devising simple games that will bring this attitude into play, thus helping to develop the strength of the anterior and posterior tibial muscles Later the much used exercise of rising on the toes and coming slowly down on the outer borders of the feet will be found helpful in attaining the same end, if it is persisted in over a considerable period of time

Maintenance of the upright position of the os calcis, or its rotation outward if there is an inclination to pronation, may be comfortably achieved by the plates illustrated in Figure 6 Their efficiency has been proved in many hundreds of cases in the last five years, and they have been found to possess a definitely curative value in the treatment of weakfoot in children Their function is to rotate the heel, and this is accomplished by tilting the floor of the plate under the calcaneum and by pressure of a thumblike flange which engages the tissues over the inner side of the bone toward its posterior extremity (Fig 7) In the first fifty cases treated, a short plate reaching forward only as far as the anterior

Fig 9—Rear view of casts in a severe case of flatfoot That on the right shows extreme bulging of the inner border of the right foot that on the left, the result of a year of treatment with Roberts plates

Fig 10—Two shoes worn by a child with [illegible] of two weeks wear without a plate 2 effect [illegible] four weeks [illegible] a plate

border of the os calcis was [illegible] the results that were obtained proved [illegible] foot strain can be relieved by [illegible] the calcaneum Later the [illegible]

include an extension to the ball of the foot, which cares for any weakness of the anterior arch and also gives the apparatus greater stability The corrected position in which the os calcis is held finally becomes the attitude of habit in the majority of cases and it is usually possible to omit the support in about two years and occasionally earlier Their effect is clearly shown in Figures 7, 8 and 9

One of the most striking demonstrations of the action of these plates is seen in cases of paralysis of the anterior tibial muscle which allows the foot to roll into the valgus position (Figs 8 and 10) Mild types of this deformity can be perfectly controlled by this device until the patient is old enough to undergo operation for a permanent correction Cases of this kind illustrate, too, the soundness of the theory that pronation of the foot can be overcome by outward rotation of the os calcis In a word, control of the calcaneum is the key to the correction of weakfoot, especially in children

576 Fifth Avenue

Clinical Notes, Suggestions, and New Instruments

SOME NEW SPLINTS AND APPLIANCES*

CHARLES F CLAYTON, M D FORT WORTH, TEXAS

The appliances shown in the accompanying illustrations were developed during the reconstruction work at U S General Hospital No 29, Fort Snelling, Minn They are believed to possess advantages over appliances previously described in the literature, designed to meet the respective needs which furnished the incentive for their development A brief description of each one of them will suffice, with the

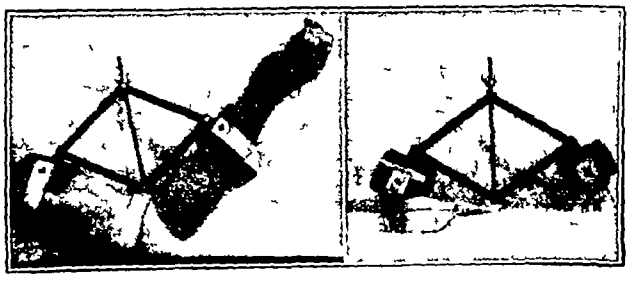


Fig 1—Extension splint for elbow

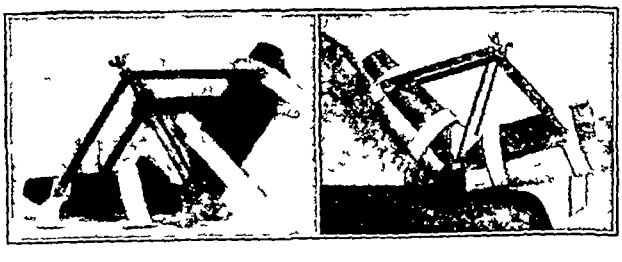


Fig 3—Reversible splint for elbow

illustrations, to make clear the underlying idea, and enable any one, with a few tools and a little material, to reproduce them for his own use

EXTENSION SPLINT FOR ELBOW

This splint (Figs 1 and 2) is an adaptation of the diamond splint idea Its special features are first, the narrow cuffs, attached to the bars of the diamond on swivels, thus insuring equal pressure throughout, and reducing thrust to a minimum, second, the elbow strap, passing through the slot in the metal which holds the center of the splint fast to the anterior surface of the joint, making it possible to force the

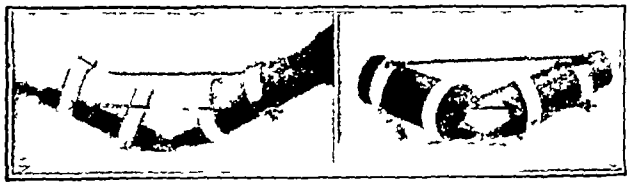


Fig 4—Reversible splint for elbow

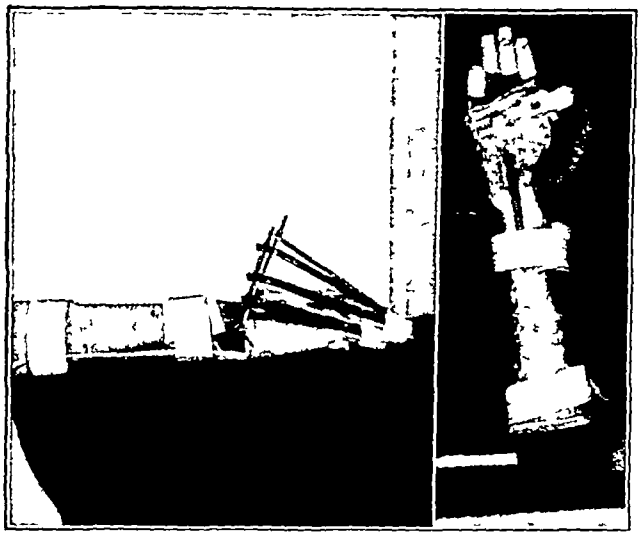


Fig 6—Extension splint for fingers

joint to complete extension, and, third, the threaded rod and winged nut, by means of which extension is accomplished The advantages of the splint are that it is light, comfortable, simple in construction, that it exerts pressure exactly where pressure is required, and that the pressure can be regulated perfectly to suit the requirements of the individual case An important feature of this splint, not shown in the illustrations, is a felt pad which should be used under each turn of the elbow strap, to prevent damage to the tissues by pressure

REVERSIBLE ELBOW SPLINT

This splint (Figs 3, 4 and 5) is modified from a plan submitted by Capt E A. Klein, Medical Corps, of Cincinnati The method of applying force by means of which flexion or extension is accomplished is exactly the same as in the extension splint, except that two threaded rods and nuts are used in each position with this splint It possesses the advantage over the foregoing of accomplishing both flexion and extension

As these splints are used, the ends of the threaded rods beyond the winged nuts should be bitten off with nippers from time to time, as flexion or extension progresses, thus rendering the appliance less cumbersome

EXTENSION SPLINT FOR FINGERS

Every surgeon has experienced the difficulty, with the means ordinarily at hand, of restoring function to fingers in contracture, the result of peripheral nerve injuries, or the involvement of tendons in cicatricial tissue The trophic disturbances which so often accompany this condition render splinting most difficult, because of the pressure necrosis which is so likely to follow attempts at mechanical reduction of the deformity The appliance, illustrated in Figures 6 and 7, was designed with the purpose in view of distributing pressure in such manner as to obviate this accident The results which have attended its use in a limited number

* Owing to lack of space the scale diagrams have been omitted They appear in the author s reprints

of cases have been most gratifying This appliance should be made to order for the individual case, as in no other way can the exact fit which is essential be obtained

It will be observed that the rod and winged nut method of applying force is employed here again The tremendous force which it is easily possible to exert by this means makes necessary here a word of caution Care should be exercised, lest too great pressure be exerted on the palmar surfaces of the fingers, this being the only point, when the appliance is properly fitted, at which direct pressure is applied It should not be attempted to force results too rapidly

ATTACHMENT FOR THOMAS LEG SPLINT

This attachment (Figs 8 and 9) was designed for use with positive bone traction, by means of calipers or tongs, but lends itself equally well, as shown in Figure 8, to use with surface traction by means of adhesive tape applied to the skin The advantages of this attachment are that by its use fractures of the femur can be treated with the knee flexed, and that the degree of flexion may be regulated at will Active or passive motion at the knee may even be employed, the slots in the disks at either side permitting a range of motion of about 75 degrees It will be observed that the method of fastening the attachment to the Thomas splint permits of adjustment to fit the length of any thigh Moreover, this feature causes the attachment, by sliding on the lateral rods of the splint, to adjust itself automatically, as extension progresses, to increasing lengths of the femur Provision is also made for adjustment in length of the leg piece, as shown in Figure 9 It will be seen that the attachment may be used with either a full length or shortened Thomas splint, and on each side Extension may be obtained by means of the Spanish windlass, rod and nut or pulley and weight

BANDAGE FOR ACROMIOCLAVICULAR DISLOCATION

This dressing (Fig 10) is thus applied A piece of felt one-half inch thick, 4 inches long and 3 inches wide is placed

Fig 8.—Attachment for Thomas leg splint

directly over the acromioclavicular articulation and the bandage applied beginning at the injured joint passing across the back to the axilla of the sound side across the front of the body, over the injured shoulder, down the back of the arm to the elbow, which is flexed to a right angle, and then up the front of the arm to the starting point Four or five complete turns are thus made, and the bandage is finished by making three or four turns around the arm as shown in Figure 10, to prevent the bandage from slipping on the forearm This dressing has the advantages of exerting pressure evenly over the dislocated joint, and of remaining in place indefinitely

It is essential to success in the use of these, as of all other mechanical appliances that they be applied with skill, and and that unrelenting vigilance attend their use This applies with especial emphasis to appliances by means of which

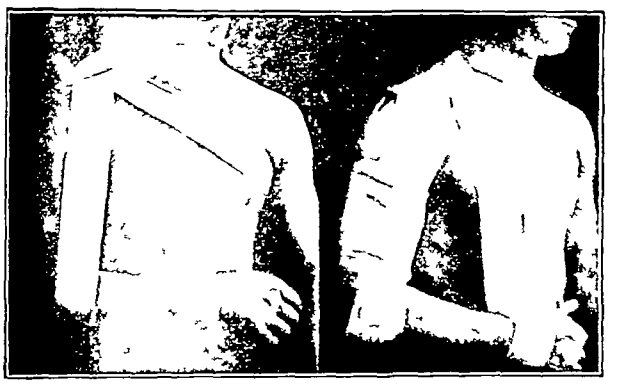


Fig 10.—Bandage for acromioclavicular dislocation

force is applied to produce motion in joints Moreover the appliances should not be used to the exclusion of other necessary measures

261 Burton Building

A NEW COMBINED BLOOD TRANSFUSION AND ASPIRATING MACHINE

MARTIN LEWIS JANES M D NEW YORK
Instructor of Orthopedic and Bone Graft Surgery New York Post Graduate Medical School and Hospital Pathologist Bellevue and Allied Hospitals Gouverneur Division

This apparatus has been used successfully at the Gouverneur Hospital for both blood transfusion and aspirating purposes The machine has for one of its objects the provision of a multiple cylinder pumping apparatus, two Luer syringes being converted into pumps, so constructed as to provide a continuous flow of blood from donor to recipient and rendering impossible accidental back-flow After repeated experimentation with the ball valve, in which balls of various metals and specific gravities were used, it was found to be unreliable because it was not leak-proof The balls do not always fall into position in their respective sockets to shut the valve completely, thus frequently causing leakage and back flow so that one is not certain whether the blood has come from donor or recipient or vice versa

Another object of the apparatus is to provide means for supporting and operating opposed pumping devices adjustable to cooperate with pumps (syringes) of different lengths and to vary the length of the stroke of the pump pistons The machine is so constructed that each pump cylinder, which is a 10 or 20 c c Luer syringe may be quickly and easily disconnected independently of the other cylinder and piston

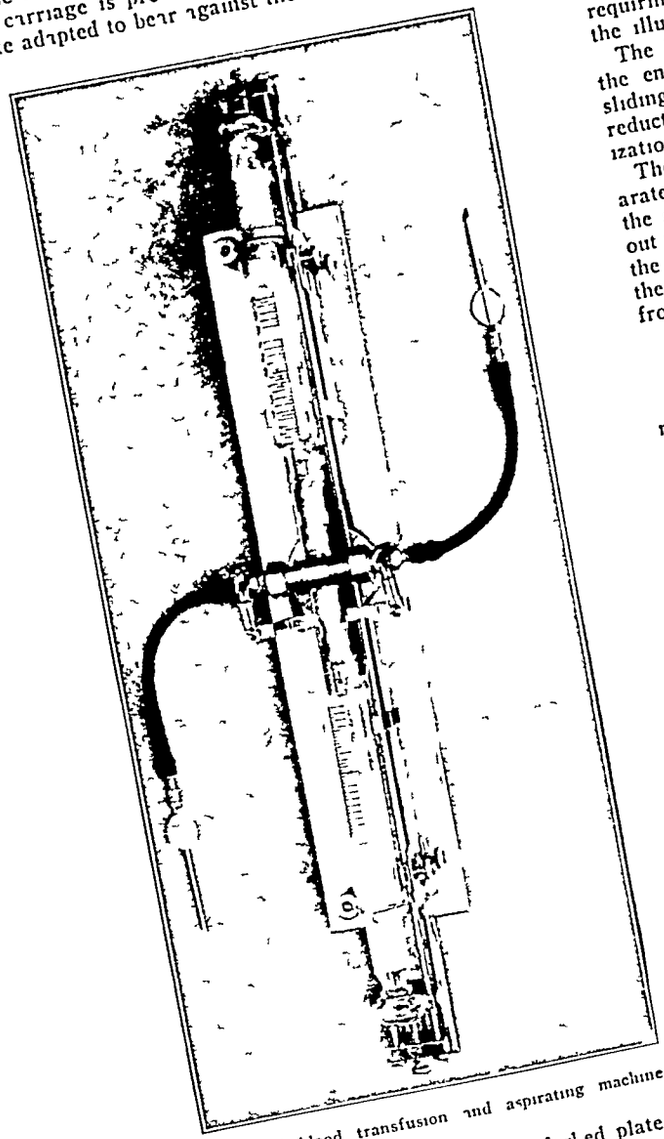
The machine consists of two oppositely faced Luer syringes which are supported on two pairs of saddles rigidly held to the base plate of the machine and in longitudinal alinement with it The syringes are removably held down in the saddles by adjustable and detachable clamps having hook portions engaging against the flanged outer ends of the syringe barrels the clamps being attached to each end-most saddle by means of clamp screws The syringes with their pistons can be quickly and easily detached from the apparatus by loosening these clamps which are held tight by means of thumb screws

The opposed plungers are connected by a reciprocable frame comprising side rods and end bars to cause the

* Presented before the Section of Surgery New York Academy of Medicine April 2 1920

plungers to move in unison in the same direction relatively to the base plate and thereby impart a suction stroke to one plunger during the discharge stroke of the other plunger To reduce friction to a minimum, each end of the frame has a carriage with a pair of rollers adapted to roll on the upper surface of the adjacent collapsible extension plate during the movement of the pistons The plungers or pistons of the syringes are removably connected at their outer ends with the carriage to move in unison with the frame and carriages, and to permit adjustment of the plungers relatively to each other and to the syringe barrels by adjusting the carriage along the frame

Each carriage is provided with a fixed, upwardly extending plate adapted to bear against the outer end of the plunger



Combined blood transfusion and aspirating machine

head, and with an upwardly extending forked plate or yoke adapted to embrace the neck of the piston and bear against the inner end of the plunger head The plunger is thus held to the carriage to move back and forth with it, but may be quickly disconnected from the carriage when the clamp held against the flanged portion of the barrel is loosened and the syringe is lifted upward

In the center of the base plate and extending transversely of the plate midway between the syringe nozzles is a tubular member which contains the conduits and valve chambers The intake and outlet valves are supported at opposite ends of the member, the valves being common to the two syringes The tubular member is provided with two oppositely extending nipples midway between its ends and in alinement with the nipples on the nozzles of the syringe barrels The nipples of the syringes and those of the conduit chamber are connected by a short length of rubber tubing

In order to prevent reversal of the direction of movement of the plunger-connecting frame without first reversing the adjustment of the intake and discharge valves, thus causing a back flow, means is provided for automatically locking the frame against reversal until the valves are properly adjusted A continuous flow of blood from donor to recipient may be obtained, and accidental back flow is made impossible The machine may be used for aspirating or pumping out abnormal collections of fluid from any of the body cavities, or for pumping in fluid, as in the administration of arsphenamin, especially in outpatient departments where it may be administered uninterruptedly, and for infusions, etc The apparatus has been found to be a time and labor saving device, requiring only one man to operate it It will be noted from the illustration that it is very simple to operate

The length of the apparatus may be reduced by sliding the end plates centrally, underneath the base plate The sliding plates are held in position by a thumb screw The reduction of its length is advantageous in permitting sterilization in a tank of minimum size.

The syringes and apparatus are, of course, sterilized separately The apparatus can easily be cleaned by removing the screws on the under surface of the plug valves, lifting out the valves from their casings and passing a wire through the conduits If, after its use, water followed by alcohol and then by ether is run through it removal of the plug valves from their casings will not be found necessary

ADVANTAGES OF THE MACHINE

1 It is a one man apparatus
2 It provides a continuous flow of blood from donor to recipient, rendering clotting impossible
3 It is a time and labor saving device Large quantities of blood can be quickly transfused and at the same time measured
4 It is absolutely leak-proof
5 It is simple and easy of operation
6 It can be used both for transfusion and for aspirating purposes and when intravenous administration of fluid is indicated

Ritz Chambers

USE OF ADHESIVE PLASTER IN CLOSING ABDOMINAL INCISIONS

J H CARSTENS M D DETROIT

The process of properly suturing the abdominal incision has gone through a long period of evolution but seems now to be about perfect with the exception of the skin suture, regarding which different views are still held Some surgeons use the subcuticular suture bringing the edges of the skin well together and sealing with collodium Sewing through the skin with silkworm gut leads to the danger of carrying *Staphylococcus albus*, always found on the skin, down to the wound, thereby setting up stitch infection In addition, removal of the stitches causes trouble and pain and some patients complain of this Recently clamps have been employed to hold the skin edges together until healing has occurred, when they are removed It has been my practice to close the skin incision with strips of sterilized adhesive plaster, a very simple technic practiced even by the laity in ordinary injuries of the face The abdominal layers are carefully sewed, but never the fat even if it is quite thick, but this is made absolutely dry and all bleeding is arrested The skin is thoroughly cleansed and then washed with alcohol, care being exercised that no alcohol gets into the wound The alcohol removes the fat from the surface of the skin, so that the plaster will adhere Then sterilized zinc oxid plaster, half an inch wide, is cut in lengths of 3 inches, the skin edges are held together with one hand while with the other the plaster strips are applied a quarter of an inch apart, until the whole skin wound is accurately adjusted The hands should not touch the adhesive surface of the plaster as

this will contaminate it Zinc oxid plaster, 2½ inches wide, is then applied around the abdomen, directly on the skin and over the smaller strips of plaster This must go well around the hips Three or four such strips, or as many as are necessary, put snugly around the body will hold the wound edges in apposition in spite of any coughing or vomiting that might take place Ordinarily no further attention is necessary for ten or twelve days when the patient is ready to go home By this time the plaster comes off easily and the patient does not complain, or only slightly It can be soaked with alcohol, but the alcohol hurts more than removing the plaster without it If the operation has been perfectly aseptic, only a small linear scar will be seen If a little stitch abscess should form the plaster can be taken off sooner, or part of it may be removed, but as a rule it is better to keep it on as long as possible For safety s sake fresh plaster is applied when the patient is sent home, this can be removed in from three to four weeks

A trial of this method will demonstrate what a simple thing it is The skin incision can be closed more quickly than by sewing it no matter what suture material is used I have used this method in operations for appendicitis, even if drainage is necessary, in cases of drainage of the gallbladder, and of course in all kinds of pelvic operations In all cases rigid aseptic precautions must be taken

1447 David Whitney Building

ROENTGENOGRAPHY OF COLLES FRACTURE

SINCLAIR TOUSEY M D NEW YORK

We have all been told that the roentgen ray has shown that many cases of supposed sprain about the wrist were really fractures But it is not so generally known that the normal roentgenographic appearance may be misinterpreted as a fracture of the lower extremity of the radius In a roentgenogram made with the hand and forearm prone on the plate, there is a natural line extending across the radius from the articular surface obliquely upward and radially to a point on the *radial* border of the radius, about an inch above the articular surface Normally no displacement, of course, is visible, but in this position it might be scarcely perceptible anyway And the absence of visible displacement in a lateral roentgenogram causes the diagnosis of a "slight fracture" to be made This mistake can be avoided by making roentgenograms of the two wrists in the same prone position A line

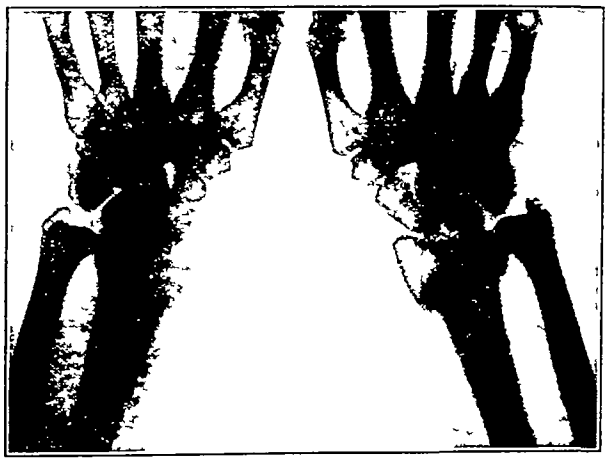


Fig 1—Both wrists prone on plate.

in the injured wrist which is the exact duplicate of a line in the uninjured wrist will not easily be mistaken for a fracture

The technic that I employ involves the making of three roentgenograms each measuring 8 by 10 inches and each including the two wrists in identical positions

The first roentgenogram has already been described. It shows both wrists prone on the plate

The second roentgenogram is a lateral one showing both wrists viewed from such a direction that the dorsal border of the radius and indeed, usually the entire radius is seen free from the image of the ulna

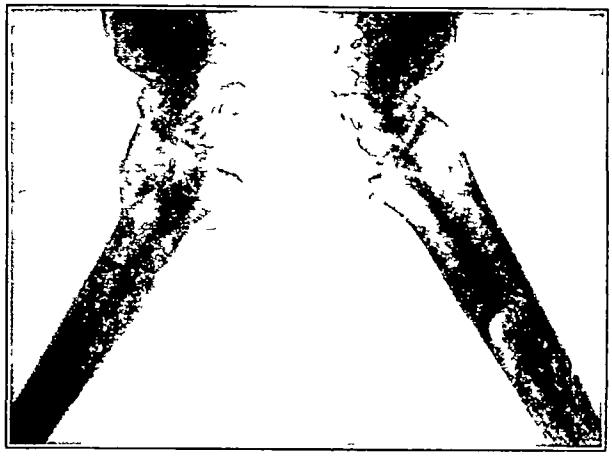


Fig 2—Lateral view dorsal border of radius free from image of ulna

Fig 3—Lateral view palmar border of radius free from image of ulna

The third roentgenogram is a lateral one showing both wrists viewed from such a direction that the palmar border of the radius is seen free from the image of the ulna In this position however the image of a considerable part of the lower extremity of the radius overlaps that of the ulna

In some actual cases of Colles' fracture there is marked deformity which is unmistakable even without the roentgen ray and in such cases all three of these roentgenograms furnish a striking picture of the displacement

In other cases there is a certain amount of deformity persisting after supposed reduction, and if not discovered in time to be successfully treated this forms a permanent disfigurement and a very real disability The case used to illustrate this article was of this type In spite of other surgical and roentgenographic opinions that the fracture had been successfully reduced Dr John M Keyes thought that the deformity and disability required fuller roentgenographic study

The prone roentgenogram would not show any dorsopalmar displacement but it does show slight displacement in what might be called a horizontal plane

The second roentgenogram shows very distinct dorsal displacement or bending dorsally of the lower fragment of the radius with evident impaction or driving of the harder upper fragment into the more cancellous lower fragment The

bending being toward the dorsum is much more clearly shown in this roentgenogram, which shows the dorsal border of the radius, than in the third roentgenogram

The third roentgenogram shows distinctly the palmar border of the radius where, in this case, there is only slight deformity, and the dorsal border is obscured by the shadow of the ulna It is required, however, to obviate the overlooking of any displacement which might in some cases not show so well in the first or second roentgenograms

850 Seventh Avenue

SYPHILITIC HYPERPLASIA OF PENIS AND SCROTUM

LEON ROSENWALD, M D KANSAS CITY, MO

True elephantiasis does not occur in this part of the world Pseudo-elephantiasis or esthiomene is fairly frequent in the colored race I have seen numerous cases of labial involvement In all of these subjects syphilis is such an important factor that the older terms have been discarded and now "syphilitic hyperplasia" is used to describe the pathologic condition Because of the unusual extent of the process, the subjoined case warrants a report

W T, a colored man, aged 52, admitted to the Kansas City General Hospital (colored division), Nov 5, 1919, a laborer in one of the packing houses, did not remember of having had any of the diseases usual in childhood, but had pneumonia in 1915, and again in 1918 In 1888 he had a primary sclerosis, for which he was treated for about one month He had gonorrhea in 1889 In 1903 he had an acute retention of urine, and the bladder was drained by the perineal route A stricture was also cut at this time The perineal opening never healed, and the patient had been passing most of the urine through the fistulous tract In 1907 he

Anterior and posterior aspects of hyperplastic parts

was struck in the perineum with a brush used for scrubbing cattle The penis and scrotum became enormously swollen, but the swelling subsided without any operative measures Within a short time, however, he noticed that the glans penis had become hard and swollen, with some induration and swelling on the scrotum Gradually this swelling and induration spread over the entire penis and scrotum till about 1915, when the process seemed to come to a standstill From that time on he had not noticed much additional growth

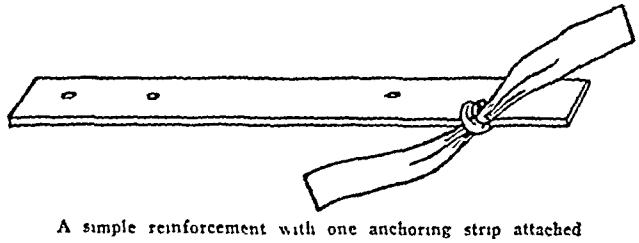
The skin over the penis and scrotum was marked by deep cross furrows, and could easily be taken for elephant's hide The patient refused any treatment We were unable to get tissue for microscopic examination He permitted the pathologist to draw some blood, which proved Wassermann positive

326 Argyle Building

A METHOD FOR SOLIDLY INCORPORATING METAL REINFORCEMENTS IN PLASTER CASTS

WILTON H ROBINSON, M D PITTSBURGH

The advantage of reinforcement with metal strips in certain casts is quite obvious, but unless they are solidly incorporated into the cast, they do not always fulfil the objects for which they are used, which may be thus summarized



A simple reinforcement with one anchoring strip attached

1 To prevent cracking at a strong joint, as spica of the hip 2 To connect two sections of a cast, as the divided cast sometimes used in compound fractures of the leg 3 To help support a heavy part, as abduction cast of the upper arm and shoulder In addition, the jury mast may be mentioned While hardly classed as a reinforcement, it is included because the part incorporated in the plaster may be very advantageously treated as here described

It is not unusual, because of the formation of a plane of cleavage in a cast, for a reinforcement to slip in the folds of the plaster bandage just a little This is especially common in the divided cast of the leg, in which slight rotation of the upper section of the cast in relation to the lower often occurs

This slight slipping of a metal addition to a cast may either make the cast of no value or convert it into a very harmful appliance, but the slipping may be prevented by the method described

The metal to be incorporated, of proper size and strength to meet the indications, is bored, at 1½ to 2 inch intervals, with small holes, through which are threaded 8 inch lengths of muslin bandage which are tied tightly at about their middle When the cast is applied to about one-half the thickness it is to be, the metal, with the attached strips of bandage, is dampened in the water in which the plaster bandages are soaked, some of the plaster cream from the bottom of the pan being rubbed into the meshes of the bandage, it is now laid on the uncompleted cast in as close contact as possible at all points, that is, it should be shaped to the contour either by the hands, bending irons or a vise The application of the plaster bandage is now continued to completion, care being taken to turn ends and corners of the strips of the bandage down and over succeeding layers of plaster bandage so as to obtain the maximum amount of "tangling" between the two, which will make for a more solid anchoring of the metal

Of course, when it is not possible to drill holes in the metal, pieces of bandage may be tightly tied on, and the whole thing incorporated in the same way, though such procedure does not prevent motion in the long axis of a metal strip

AN IMPROVED CONCENTRATION TECHNIC FOR THE DETECTION OF TUBERCLE BACILLI IN SPUTUM*

THEOPHILE RAPHAEL, A.M., M.D., AND NINA ELDRIDGE NEW YORK

The possibility of refinement in routine sputum analysis is of importance, particularly as it affects those handling both frank and suspected cases of tuberculosis. We have investigated the practicability of a technic modification which suggested itself in connection with the concentration procedure reported by Greenfield and Anderson[1] in September, 1919, and, recently, ingeniously adapted to institutional routine by Woolley.[2]

According to the technic of Greenfield and Anderson, 5 c.c. of sputum, to which two volumes of 1 per cent. sodium carbonate in 1 per cent. phenol have been added, are shaken in a centrifuge tube and incubated for from twelve to twenty-four hours. The material is then centrifuged for about fifteen minutes, the supernatant fluid decanted, and smears made from the sediment and specifically stained.

While we were working with this technic with a view to its adoption as a routine measure for Sea View Hospital it occurred to us that greater refinement and marked time saving might possibly be afforded, if a short period of autoclaving was substituted for the comparatively lengthy incubation of the original method. The value of simple autoclaving is well known,[3] and there was no reason to suppose that even better results might not be obtained through the addition of the sodium carbonate-phenol mixture. No original is claimed for this modification, although search of the literature has not disclosed evidence of its previous use.

PROCEDURE

The method of staining employed throughout was essentially the classic Ziehl-Neelsen method, which, for the purpose of greater precision, may thus be given in detail. The slides were steamed in carbolfuchsin for three minutes, decolorized in 5 per cent. acid (hydrochloric) alcohol and 65 per cent. alcohol, and counterstained in an aqueous solution of methylene blue for one minute. They were then washed in tap water and dried.

The slides were examined independently by two observers. At least forty fields were examined in each case before a diagnosis of negative was returned, and, in scoring it was found most practicable to utilize our routine laboratory scale. From 1 to 5 bacilli per slide = (f)ew, from 6 to 15 bacilli per slide = (m)oderate, 16 + bacilli per slide = (n)umerous.

In the first place, to demonstrate the superiority of simple autoclaving (twenty minutes at 15 pounds pressure) over the direct smear method, there were examined thirty-three sputum specimens from patients referred to this hospital as presumably tuberculous, but whose sputums had not been previously examined in this laboratory. Of these thirty-three cases, there were found six in favor of the simple autoclaving method or roughly, for the purpose of gross comparison, a percentage of 18.1.

In the same manner the original Greenfield-Anderson technic was tested against the direct smear procedure with forty similar cases. This test showed a difference of 60 per cent. in favor of the Greenfield-Anderson technic.

On the basis of a series of forty-six similar cases, the suggested autoclave modification of the Greenfield-Anderson technic showed a superiority of 32.5 per cent. against the antiformin method, which in turn, scored 25.5 per cent. better than the direct smear method in forty-seven cases.

The exact technic employed by us in the autoclave modification of the Greenfield-Anderson procedure was as follows. Five c.c. of sputum to which had been added two volumes of 1 per cent. sodium carbonate in 1 per cent. phenol were shaken for ten minutes and then autoclaved for twenty minutes at 15 pounds pressure. Following this the material was centrifuged for ten minutes, the supernatant fluid decanted and smears made and stained from the sediment.

The antiformin procedure employed by us was as follows. The reagent consisted of equal parts of 15 per cent. sodium hydroxid and Labarraque's solution. Five parts of sputum with one part of reagent were shaken for fifteen minutes, incubated for one hour, and then centrifuged for fifteen minutes. The supernatant fluid was decanted and the sediment washed by centrifuging for fifteen minutes with distilled water. Smears were made and stained from the sediment.

In the comparison between the Greenfield-Anderson technic and the suggested modification of that procedure, in order to make the test more rigid only such sputums were employed as had been previously found negative to the simple autoclaving technic which as has been shown was found to be 18.1 per cent. more delicate than the direct smear method. The added rigidity of this routine may be inferred from the fact that out of fifty-three such cases the suggested autoclave modification of the Greenfield-Anderson technic showed a superiority of only 9.4 per cent. over the antiformin procedure as compared to a superiority of 32.5 per cent. in forty-six cases which had not previously been found negative as already mentioned. Fifty-one cases of the latter type were very carefully examined in the manner indicated above both in accordance with the original Greenfield-Anderson procedure and with the suggested autoclave modification. This comparison showed a difference of 2 per cent. in favor of the modification method not including one case which was discarded because of disagreement between the observers although the disagreement was in favor of the modification.

As an example of the hydrocarbon principle in sputum concentration the gasolene method of Krauss and Fleming[4] was investigated. This procedure was not tested very extensively, as, from the outset the technic seemed hardly of sufficient simplicity or practicability to warrant adoption as a routine laboratory procedure particularly for laboratories in which a great number of cases are being handled. However, on the basis of ten not previously determined specimens the direct smear procedure showed a superiority of 30 per cent. over this gasolene technic.

COMMENT

It is evident that the procedure of simple autoclaving is superior to the direct method, although it is not quite so efficient as the antiformin procedure. The suggested autoclave modification of the Greenfield-Anderson technic seems distinctly superior to the antiformin procedure, which may be regarded as generally standard, and which until recently appears to have been about the best of the concentration methods. In addition, however the autoclave modification is much more simple and convenient for laboratory routine the reagent being much more readily prepared and the manipulation minimal. As regards the original Greenfield-Anderson technic, although there is no doubt as to its great efficiency and reliability yet it is obvious that the autoclave modification of this technic is at least as good and indeed on the basis of the actual figures of our test, even somewhat better. In addition, the autoclave modification need consume but fifty minutes at the most while the original procedure requires at least fifteen to twenty four hours an element of considerable importance when time is a factor as it so frequently is particularly with patients coming only for examination and diagnosis. Besides in the modification, there is no doubt as to the sterility of the material while in the original procedure Greenfield and Anderson do not seem to have attained this completely.

SUMMARY

On the basis of our tests it appears that

1. The Greenfield-Anderson incubation technic and the suggested autoclave modification of this procedure are definitely superior to the direct smear, gasolene, simple autoclave and antiformin procedures for the preparation of suspectedly tuberculous sputums.

2. The autoclave modification of the Greenfield-Anderson technic is slightly more delicate than the original method.

3. Further advantages of the autoclave modification over the original technic are (a) great time saving, and (b) assurance of sterility.

* From the Laboratory, Sea View Hospital.

1 Greenfield, J. G., and Anderson, J.: Lancet, 2: 423 (Sept. 6) 1919.

2 Woolley, Stanley: A Simple Technic for Concentrating Sputum, J. A. M. A., 74: 525 (Feb. 21) 1920.

3 Gilbert: Manual of Procedure for the Clinical Laboratory, Ann Arbor, 1919, p. 14.

4 Krauss, W., and Fleming, I. S.: J. L. [illegible] (Sept.) 1916.

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SATURDAY, JULY 24, 1920

CHEMOTHERAPY OF TUBERCULOSIS, WITH PARTICULAR REFERENCE TO THE "CERIUM SALTS TREATMENT"

Directly after his discovery of the tubercle bacillus, Koch made numerous attempts to find chemical agents that might be used to cure tuberculosis,[1] with the tentative assumption that substances which prevent growth of tubercle bacilli in cultures could perhaps exert the same effect on these organisms in the animal body. He found numerous substances that were capable of inhibiting growth of tubercle bacilli in culture mediums to which they had been added in great dilutions, especially a gold cyanid compound, but, not being given to self-deception, he stated that "all these substances remain completely inactive when tested upon the tuberculous animal." His attention was then diverted to the study of tuberculin as a more hopeful agent, and there followed a period of fifteen years during which little was done toward seeking for chemical agents valuable in the treatment of tuberculosis, except for a little inaccurate and valueless work with compounds related to creosote and guaiacol. These substances came to have a widespread reputation as tuberculocidal agents without any one's taking the trouble to ascertain definitely whether they really had any particular capacity to injure tubercle bacilli in the test tube, the tuberculous animal or the consumptive patient, although the German manufacturing chemists did splendid work in providing innumerable derivatives, each with a new copyrighted name and a patented process of manufacture.

With Ehrlich's brilliant achievements, not only with the widely known trypanicidal and antisyphilitic compounds, but also with his careful but less known studies on "semispecific chemical disinfectants,"[2] a new interest arose in the possibility of extending this method of procedure into the field of tuberculosis therapy. Since then numerous substances have been brought forward as cures of tuberculosis under the impressive caption of "chemotherapeutic agents," and with series of a score or a hundred clinical cases in which "favorable results" have been observed. Copper has had a particularly enthusiastic boom. Gräfin von Linden and her followers in Germany projected a "complex lecithin-copper compound" of unannounced composition but of well-advertised manufacture, with the usual favorable clinical results, especially in lupus and localized nonpulmonary lesions, as is generally the case.[3] From the other side of the world, in Tokyo, came another copper cure, the cyanocuprol of Koga, while copper arsphenamin and other copper compounds sprang into the literature until the war turned attention into other channels. It is now eight years since von Linden's copper-lecithin compound made its appearance, but in the tide of German literature that is now beginning to trickle once more toward our shores, we do not notice any considerable number of references to the use of this compound, although much is said about the alarming spread of tuberculosis in the Teutonic countries. Cyanocuprol is still on the market, but the Japanese continue to advance new compounds, sometimes of copper, sometimes of gold and sometimes of neither, for the cure of tuberculosis, so apparently Koga's discovery has not settled the tuberculosis problem in Japan.

The trouble with the chemotherapy of tuberculosis is that it is too difficult, and especially it is too slow. Chemotherapeutic research is built up in slow stages at the best, but the slowness and the difficulty are augmented many times when the tubercle bacillus is the subject. First comes the determining of the capacity of compounds to inhibit growth of the tubercle bacillus in cultures—and the tubercle bacillus is not the easiest of organisms to handle, especially in incompletely equipped laboratories. Then must be determined what the capacity is to kill bacilli, which requires most meticulous technic, and control by inoculating scores or hundreds of guinea-pigs, which must be watched and studied for months or even for a year in each experiment. Then must follow experimental therapeutics on animals, which means daily work with further hundreds of animals, all under the most careful technic and control. Such work as this is by far the most difficult and expensive sort of chemotherapeutic study yet undertaken, requiring not only abundant equipment and resources, but also a cooperating staff of most highly trained bacteriologists, pathologists and chemists, and especially a highly critical direction. It cannot be done by casual investigators in a few months' time with an ordinary laboratory equipment.

We have made this somewhat lengthy statement in lieu of a more extended discussion of recent reports concerning the treatment of tuberculosis by the so-

1 Lewis, P. A.: On the Possibility of Developing an Experimental Chemotherapy of Tuberculosis, Bull. Johns Hopkins Hosp. **28**: 120 (March) 1917.

2 Bechhold and Ehrlich: Ztschr. f. physiol. Chem. **47**: 173, 1906. Bechhold: Ztschr. f. Hyg. u. Infektionskr. **64**: 113, 1909.

3 Corper, H. J., DeWitt, Lydia M., and Wells, H. G.: The Effect of Copper on Experimental Tuberculous Lesions, J. A. M. A. **60**: 807 (March 22) 1913.

called cerium earth salts, which, happening to have been taken up by the daily papers, have achieved a notoriety and publicity which is undoubtedly far in excess of the desires of the French physicians who have introduced the procedure Such reports as have been published are at hand,[4] and the sum and substance of the matter seems to be about this A few observations of the inhibitory activity of salts of cerium and some other rare earth metals (especially samarium, neodymium and praseodymium) were made on the growth of tubercle bacilli in cultures, possibly because they are rare substances and had not yet been shown to be valueless in tuberculosis According to the figures given, the inhibitory action of these salts is not at all high, about one to five parts per thousand being required to prevent growth, which may be contrasted with gold chlorid, which inhibits when in dilution of 1 2,000,000, and yet which in the careful studies of DeWitt,[5] as in the earlier observations of Koch, could not be made to show any favorable influence on tuberculosis in animals Innumerable substances have a more powerful inhibitory effect on tubercle bacilli than these rare earth salts Much is made of the reduction of the fat content of the tubercle bacilli grown on mediums containing these salts, the fat being reduced, it is said, from 25 to 40 per cent to 16 to 22 per cent , but we know of no evidence that such variations in fat content have any significant relation to the virulence of the tubercle bacillus for man As far as we can learn, no attempts were made to determine the capacity of the salts of the rare earths to kill tubercle bacilli, and there is no report made of any systematic study of their effects on experimental tuberculosis in animals, in which alone can accurate controls be made We merely have the statement that on the basis of this slight inhibitory effect in cultures, and, what is perhaps more important, a capacity to cause a mononucleosis, a small number of cases of human tuberculosis have been treated with cerium salts by repeated intravenous injections These cases, less than a hundred in the reports published, have now been observed at most a few months, and it is believed that cutaneous, glandular and chronic afebrile tuberculous pulmonary lesions have been improved, and that patients with active pulmonary tuberculosis have been made worse There is no mention of control patients given the same general care without the salts Possibly cerium earth salts help the tuberculous The evidence so far presented, however, is nothing to get excited about Many other agencies, now forgotten, have had as much and more reported in their favor at this stage of their history We cannot find support for the statement of Renon "The results obtained by Grenet and Drouin with the sulphate of the cerium earths are certainly the most scientific yet realized in the chemotherapy of tuberculosis" We find much more support for the closing statement of Paul Lewis' address "Certainly it will be a most unfortunate thing for the progress of tuberculosis research if every substance showing interesting properties in the laboratory is immediately rushed to the clinic regardless of consequences In this situation patience is to be taken more than usually as an evidence of virtue"

4 Grenet H and Drouin H Traitement des infections tuberculeuses chroniques par les sels de terres ceriques Bull et mem Soc med d Hop de Paris 44 589 (May 7) 1920 Renon M L Ibid p 602 Esnault M and Brou M Ibid p 606 abstr J A M A this issue p 276

5 De Witt L M J Infect Dis 23 426 (Nov) 1918

FACTORS FACILITATING CIRCULATORY SHOCK

The numerous investigations of circulatory shock have at length made it clear that hemorrhage is not invariably a cause of the condition Under certain circumstances oligemia may arise, even without loss of blood from the body There is a diminution of the volume of blood in effective circulation which has been attributed to a loss of the normal tone of the capillary blood vessels, or to a morbid permeability of the capillary walls A shocklike collapse of the circulation then follows the failure to maintain an effective blood volume or the analogous outcome of a loss of fluid from the vascular system

The development of circulatory shock without actual bleeding has been demonstrated after extensive injury to tissues, especially to muscle The recent evidence indicates that in this condition, sometimes denoted "secondary wound shock," an aseptic traumatic toxemia may occur, owing to the absorption of substances produced by the injury or liberated in the subsequent autolysis of the tissues involved Thus, during the war Bayliss and Cannon demonstrated that when the thigh muscles of an animal were crushed under anesthesia a progressive fall of blood pressure with other symptoms of shock developed If the blood vessels to the leg were clamped during the injury, the shock effect did not ensue until the clamps were removed Bayliss[1] has insisted on this account that the circulatory collapse was due to the absorption of some toxic substance produced in the injured cells He believes that this conclusion was confirmed by the fact that massage of the injured parts brought about an increase in the rate of fall of the blood pressure The latter result is of interest in view of the clinical experience of the importance of keeping injured limbs as immobile as possible, especially when fractured Surgeons have found that application of a tourniquet centrally to the injured part is followed by marked improvement Similar results have been obtained by rapid excision of the damaged tissues

It was a decided advantage for the investigation of circulatory shock when Dale, Richards and Laid-

1 Bayliss W M The Action of C Circ... J Pharmacol & Exper Therap 15

law[2] found that a condition decidedly similar to it could be produced by the administration of histamin in suitable doses Apparently it produces throughout the whole circulatory system a group of phenomena which are recognized as inflammation when they occur locally Although it is easily conceivable that histamin might arise from the amino-acid histidin, which is an integral complex of the tissue proteins, there is no proof that histamin is in fact the substance responsible for the capillary damage and altered permeability in traumatic toxemia For the present it represents merely a convenient agent for the experimental production of shock through chemical influence on the blood vessels Dale[3] has been further enabled by it to study what influences may have an adjuvant effect in the genesis of shock following traumatic toxemia Exhaustion, pain, cold, thirst, hemorrhage and anesthetics have all been alleged to play some part in the incidence of the circulatory collapse Dale has correspondingly found that some of these factors which are suitable for experimental investigation actually lower in a striking degree the normal resistance to the poisonous histamin This is particularly true of a large but not in itself serious hemorrhage It is likewise true of anesthetics like ether, in contrast with nitrous oxid and oxygen Dale regards it as probable that the resistance of the otherwise perfectly healthy subject to products of tissue injury would similarly be high, and it is reasonable to attribute the demonstrated danger of chloroform or ether to the severely wounded man, and the relative safety of nitrous oxid, to the much greater effect of the former anesthetics, as shown in these experiments, in depressing the normal resistance to this type of toxemia Furthermore, it seems possible to Dale that the greater safety in civilian operations, shown by Crile and others, of the combination of local anesthesia with nitrous oxid and oxygen, as compared with prolonged anesthesia with ether or chloroform, may find its true explanation along the same lines Hence Dale thinks that in cases in which bacterial or other toxemia is present, chloroform and ether should be avoided whenever possible

If we regard the shock produced in operations as attributable to a combination of such factors as toxemia from injured tissues, hemorrhage and anesthetics, it is interesting to learn that the solution of gum acacia in saline as advocated by Bayliss[4] in particular gives promise of combating many of the difficulties encountered It has no chemical or drug-like action and can be used in large quantities, and owing to the osmotic pressure of the colloid gum, which cannot readily escape from the blood vessels, fluid which would otherwise disappear is retained within the blood vessels In the words of Bayliss[1] the gum-saline solutions can be used with benefit when the blood volume is reduced, owing to removal of a part from effective circulation by stagnation in the capillaries, as happens in wound shock, traumatic toxemia, and probably in other similar conditions In such cases, its primary object is to maintain a normal circulation until the toxic products are eliminated from the blood, while the blood out of circulation is restored to use When fluid has escaped from the blood, owing to capillaries becoming permeable to colloids, as in the action of tissue toxins, gum-saline restores the normal state, provided the morbid condition has not lasted too long In the latter case, even transfusion of blood is of no avail

2 Dale H H and Richards A N J Physiol 52 110 (July) 1918 Dale H H and Laidlaw P P J Physiol 52 355 (March) 1919 Dale H H Laidlaw P P and Richards A H Traumatic Toxemia as a Factor in Shock Special Report Series 26 Medical Research Committee London 1919

3 Dale H H Conditions Which Are Conducive to the Production of Shock by Histamine Brit J Exper Pathol 1 103 (April) 1920

4 Bayliss W M Intravenous Injection in Wound Shock New York Longmans Green & Co 1919

SCIENCE IN THE MEDICAL CLINIC

The possibility of making accurate observations at the bedside on the basal metabolism of patients represents a distinct step in the direction of progress in clinical medicine To one who has followed many of the "crudely unscientific" performances in the consideration of alleged disorders of the endocrine glands, the institution of precise diagnostic measurements and analyses in place of the guesswork of former years is truly significant The usefulness of scientifically dependable estimations of bodily functions looms up large Only a short time ago a distinguished physiologist felt justified in remarking ironically that when several unknown factors may be interacting, as happens in the study of the internal secretions, it is pleasant to give the fancy full play, and this is also a perfectly harmless occupation provided such mental activity does not develop into hallucination[1] Four years ago, Du Bois' review[2] of the few carefully investigated cases of the metabolism in thyroid disease revealed the possibilities in the way of more exact differentiation between true hyperthyroidism, hypothyroidism, and ill defined disorders exhibiting related symptoms The stimulation or depression of metabolism has become open to more precise clinical interpretation A knowledge of the basal metabolism rate in each patient has acquired a unique value in thyroid disorder because, to quote a recent writer, it gives a very accurate mathematical index of the degree of functional activity of the gland

Among the hospitals in which the determination of basal metabolism in suitable cases has now become a routine procedure, the Mayo Clinic has afforded the largest number of records of its possible usefulness

1 Lusk Graham The Science of Nutrition Philadelphia W B Saunders Company, 1917 p 439

2 Du Bois E F Metabolism in Exophthalmic Goiter Arch Int. Med 17 915 (June) 1916

in thyroid disease In a summary of the observations on several hundreds of patients, published by Sandiford,[3] the success of types of remedial treatment for exophthalmic goiter is evaluated by measurements of basal metabolic rates In 182 cases before any treatment was instituted, the average rate was 51 per cent above normal, with an average pulse rate of 115 A week's complete rest reduced the rates in selected cases to + 46 per cent and 108, respectively The results of single and multiple ligations could be similarly ascertained and the most advisable steps in treatment pursued on the basis of accurate data In myxedema the metabolic rate may fall to 40 per cent below normal As there are few known disorders in which constant and distinct variations from the normal in the basal metabolic rate have been demonstrated, the significance of the findings in thyroid disorders becomes accentuated The differential diagnosis of neuroses simulating hyperthyroidism or hypothyroidism becomes more easily possible because no definite instance of an altered rate has been found in that group of cases designated as neurasthenia or chronic nervous exhaustion The clinical application of the estimation of the rate of basal metabolism is a direct outcome of the work of the scientific laboratory, and yet there still are those who speak contemptuously of the value of laboratory investigations in what they delight to call "practical medicine '

Current Comment

HAMSTRINGING THE FOOD AND DRUGS ACT

During the last few years the people of the United States have been given a very material amount of protection against those swindlers who sophisticate the foodstuffs and drug supplies of the country Especially good work has been done in obtaining convictions against "patent medicine" fakers who have made false and fraudulent claims for their nostrums This protection has been given through the enforcement of the federal Food and Drugs Act The administration of this law rests with the Department of Agriculture, which, acting through its Bureau of Chemistry, collects evidence and lays the groundwork for the legal machinery of the government to proceed against the offender The activity of the Bureau of Chemistry of the Department of Agriculture has, of course, aroused the strongest antagonism on the part of the nostrum interests These interests may well rejoice in the recent action of Congress in cutting down the appropriations for the Department of Agriculture Even under the appropriation given for the last fiscal year, which ended June 30, 1920, the department was greatly hampered in its work of enforcing the Food and Drugs Act Under the plea of economy, Congress has reduced the appropriation for the enforcement of this act by thirty thousand dollars The *Oil, Paint and Drug Reporter*, a high-grade and conservative publication, well states the fact, in commenting on this disgraceful condition of affairs, when it says

> Under the reduced amount provided for next year, it will be impossible to supervise the regulation of the Food and Drugs Act as it should be supervised This portends a rich harvest for those who misbrand and adulterate medicinal, pharmaceutical, disinfectant and other preparations The vast public, which daily purchases and consumes these products, will be the chief sufferer At a time when the act requires enforcement of the most rigorous nature the Congress has succeeded in hamstringing it

At a time, then, when in all lines of industry the spirit of exploitation is rife, Congress, under the specious plea of economy, practically nullifies the protective power of one of the most useful pieces of federal legislation ever enacted

THE NEWER QUACKERY

The large auditorium is filled with beautifully gowned women There is a subdued hum of chatter and light laughter Silently the magnificent maroon velour curtains are parted, as though by some invisible genii The lights become dim Then there walks—almost glides—on the stage a man faultlessly attired, his lustrous hair brushed back from a pallid countenance The audience is hushed He begins to speak in sympathetic tones pouring forth well rounded but meaningless phrases about the perfection of ideality, happiness through the sacrifice of the excentric ego, the attainment to Nirvana through immolation on the pyre of ideal scientific introspection He promises youth and health to those who will believe and study And the audience—women, occupiers of one room kitchenettes, suffering with the ennui of idleness, faces elaborated with artifices in attempt to simulate the long lost buoyancy of youth—sigh happily as they dream of the mirage he brings up before them Quiet ushers pass along the aisles, and with sibilant whispers distribute cards on which arrangements may be made for personal consultation with the "professor" Thus works the newer quackery—health and happiness through commercialized psychology

THE HOSPITAL LIBRARY

> *To the Editor* —Will you kindly send us a list of books, with approximate cost necessary to furnish an up to date library for our interns? SUPT

This query, from the superintendent of a large hospital, using a considerable number of interns, is not the first request for such information that has been received It is a practical, timely problem, and THE JOURNAL will be glad to help in its solution Hence, suggestions are asked for such a library Different institutions will have different requirements some will be able to buy only fifty books, others more, some possibly a less number Let the suggestions cover thirty, fifty, seventy-five and one hundred books Naturally those who are kind enough to make

3 Sandiford Irene The Basal Metabolic Rate in Exophthalmic Goiter (1 917 Cases) with a Brief Description of the Technic Used at the Mayo Clinic Endocrinology 4 71 (Jan. March) 1920 Boothby W M and Sandiford Irene Technic of Basal Metabolism Rate Determinations Philadelphia W B Saunders Company 1920

the trouble to respond will give the matter careful thought before making the selection Institutions having satisfactory libraries can help by sending us a list of books that they have found most desirable It may be that it will be possible to tabulate the replies in such a way that the composite information will be of advantage to many institutions as well as to young physicians who are beginning practice

THE EASIEST WAY

A gynecologist was speaking "No," he said, "I haven't taken out a permit In twenty years of practice I have yet to find a case in which I could be sure whisky was beneficial Not having a permit makes it easy for me to turn down requests from my intimate friends and patients" Then the opinions of a well-known internist, a pediatrician, a surgeon, and some general practitioners were sought None of them, with the exception of one of the latter, had taken out a permit He had given ten prescriptions in three months, and he admitted—not for publication—that in nine instances the prescription was written at the patient's request, and in the tenth something else would have served Don't subject yourself to temptation, don't hurt the feelings of your patient or of a very particular friend by refusing to write a "prescription" when he pleads for one Have a good excuse for not doing so The easiest way is not to have a "permit," much less a book of blank prescriptions

WHAT CONSTITUTES AN OVERSUPPLY OF PHYSICIANS

Our Berlin letter this week is devoted largely to a discussion of conditions in the medical profession in Germany Incidentally, it is claimed by our correspondent that the medical profession is seriously overcrowded, statistics are quoted to show there is one physician for every 1,920 persons In reading this, one is led to wonder how our correspondent would regard conditions in this country, where there is one physician to less than 750 population

Medical Journals Facing Crisis—The *Policlinico* of Rome states that in Italy all the medical journals are encountering serious difficulties from the scarcity and high price of paper and of labor, etc Some of the journals have had to merge and others have raised their subscription price A conference of editors and publishers of scientific and other journals was held recently at Rome, and a group of physician members of the national legislature have appealed to the minister of public instruction on behalf of the medical journals In France, the *Presse medicale* and some of the other medical journals have raised their price The *Presse medicale* is now 40 francs, instead of 25 francs as last year In Belgium, the two leading medical weeklies are now published by the same firm, to save expense The *Semana médica* of Buenos Aires has also announced that its subscription price is to be raised and in Germany the four leading medical weeklies have also raised their prices Subscription to the *Deutsche medizinische Wochenschrift*, for example, which was in Germany 24 marks in 1915 and 34 in 1919 is now 80 marks For foreign countries the subscription was 32 marks in 1915 and 42 marks in 1919, but is now stated for the United States to be $5 (plus postage) The price for different countries varies with the rate of exchange at present

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION PUBLIC HEALTH ETC)

ARKANSAS

Colored Physicians Organize—Colored physicians and dentists of Mississippi and Crittenden counties met June 25 at Blytheville and organized the Northeastern Arkansas Medical Association They elected the following officers president, Dr E L Fern, Osceola, secretary Dr G W Ezell, Blytheville, treasurer, Dr Benjamin E Roberts, Plymouth, and corresponding secretary, Dr Thornton J Meacham, Turrell

ILLINOIS

Chicago

Physician Adjudged Insane—Dr Edmond R Moras formerly a practitioner of Chicago, but now said to be a manufacturer of proprietary medicines in Highland Park, was adjudged insane July 6

Liquor Permits Revoked—Capt Hubert Howard, federal prohibition director is said to have revoked the permits to prescribe liquor of Drs George C Busch and Max Gecht. The permits of four druggists were revoked at the same time

Illegal Practitioner Fined—Ernest W Johnson an assistant in the office of Dr George C Hunt, chief ambulance surgeon of the police department of Chicago, was arrested by the department of registration and education for practicing medicine without a license On July 13 he entered a plea of guilty in the municipal court of Chicago and was fined $50 and costs

Blunt Paroled—Dr Arthur L Blunt sentenced to imprisonment in the federal penitentiary Fort Leavenworth a year ago on many charges of trafficking in drugs is said to have been paroled and to be in Chicago It is stated that the parole was granted on Dr Blunt's promise to reveal the inside story of the graft alleged to have been paid to William H Sage, former chief of the narcotic squad

Reports from Midwives Lacking—Of the 16,000 missing babies in Chicago fifty were found July 14, when thirty midwives were called before a board of inquiry consisting of the assistant corporation counsel and Drs Martin O Heckard and Harold O Jones It was found that the majority of the midwives could not speak English and that one midwife had failed to report nine births One midwife who had been in this country seventeen years appeared before the board with an interpreter The state board of registration has been requested by the board to serve notice on all midwives that unless they learn the English language within a year their permits will be revoked

KENTUCKY

Railway Sanitation Code Adopted—The state board of health has adopted the railroad sanitation code devised by the U S Public Health Service and Railroad Administration These regulations cover sanitation in trains, and waiting rooms and deal with water supply cleaning cars and stations and the consideration of a supersedence of routine disinfection of cars by frequent vacuum cleaning

Assistant Examiner Appointed—In accordance with the amended act passed by the last legislature, the state board of health has appointed assistant examiners from lists furnished by the various schools of medicine or cults These examiners will conduct examinations in the special knowledge required by the various schools, the board continuing to examine in physiology anatomy pathology and chemistry No appointments were made of assistant examiners representing the chiropractors as two lists were furnished the board by rival associations

Hospital Beds in Louisville—In a report made to the Jefferson County Medical Society by a special committee Dr Virgil E Simpson, chairman shows the city amply provided with beds for the sick poor, but very inadequately provided with beds for pay patients The matter was referred to the health committee of the community council of which Dr Morris Flexner is chairman At a meeting just held attended by representatives of all the hospitals of the city, county

medical society, and welfare league a committee was appointed to arrange ways and means for the establishment of an interdenominational hospital to care especially for the communicable diseases in persons of the city able to pay for care as it was pointed out that the city hospital can care for these cases in the families of the poor

MAINE

Speakers' Bureau Organized—A speakers' bureau has been organized by the Maine Public Health Association with the object of promoting a more intelligent interest in problems of public health and welfare About seventy-five prominent men and women of the state have enrolled in this bureau and will shortly be prepared to speak on these topics before chambers of commerce, rotary clubs churches community forums, women's clubs and other bodies of similar nature

New State Officers—At the annual meeting of the Maine Medical Association held in Augusta, June 29 and 30 the following officers were elected president Dr Theodore E Hardy, Waterville, vice presidents, Drs George R Campbell, Augusta, James McFadyen, Jr Milo, Warren E Kershner, Bath and Forrest H Badger, Winthrop secretary-treasurer, Dr Bertram L Bryant, Bangor and delegate to the American Medical Association, Dr Addison S Thayer, Waterville

State Clinics for Physicians—Under the auspices of the Maine Public Health Association cooperating with the state department of health and the Maine Tuberculosis Sanatorium arrangements have been made for a series of special lectures and laboratory demonstrations to be given at the Central Maine Sanatorium Fairfield, beginning on August 2 and continuing through August 6 The program includes laboratory demonstrations, roentgen-ray demonstrations, physical diagnosis, particularly as this relates to pulmonary tuberculosis, differential diagnosis of tuberculosis, methods of diagnosis and treatment of venereal diseases, cancer control, and also the diagnosis of nontuberculous diseases of the chest and pathologic conditions of the upper respiratory tract

MARYLAND

Summer Sanitation Planned—A general discussion of plans for summer work, which include sanitation problems in Maryland summer resorts was held at a meeting of deputy state health officers, July 17, at the office of the state board of health, Baltimore The meeting was called by Dr John S Fulton secretary of the board The antityphoid fever campaign for the summer was one of the principal topics of discussion

Personal—Dr Henry Arthur Mitchell Elkton, who commanded the One Hundred and Thirteenth Field Hospital in France, is a patient at the university hospital where he expects to undergo an operation——Dr Charles L Mattfeldt, Catonsville health officer of the first district while on a vacation trip was taken suddenly ill at Niagara Falls and returned to his home from which he was later removed to St Agnes' Hospital

New Government Clinic Opened—A second government night clinic similar to that in operation at Mercy Hospital has been opened at the university hospital It is open to men Tuesday and Friday nights and to women Monday and Thursday nights of each week The new clinic will be directed by the same physicians that are in charge at Mercy Hospital and will follow the methods used there The daily average of patients treated for social diseases at the latter institution is above twenty-five and some days as many as 150 apply The staff of the clinic includes Dr Anton G Rytina, director Dr Wilford A H Councill, Dr Harry M Robinson and Dr R Gerard Willse

Health Lessons Given to Children—The children's playground association has broadened its activities this summer with the institution of health demonstrations The demonstrations will be held at one of the playgrounds each day throughout the summer and will teach the fundamentals of health and care of the body The Maryland Tuberculosis Association is cooperating and has announced that a silver cup will be awarded to the playground making the highest number of health points" Dr Caroline B Towles, Baltimore will direct the educational classes for mothers which will be held at the various recreational centers in the evenings

MICHIGAN

State Takes Over Tuberculosis Clinics.—Arrangements have been completed by the Michigan Tuberculosis Association whereby the Michigan State Department of Health will take over the free tuberculosis clinic and the tuberculosis work among exservice men, hitherto conducted by the association

Memorial Tablet for Nurse—Friends of Julia E. Lide formerly superintendent of the Emma L Bixby Hospital, Adrian who died in France have subscribed to a fund for a memorial tablet to be placed in the hospital bearing this inscription

In memory of Julia Lide Red Cross Nurse Superintendent Emma L Bixby Hospital December 15 1913 to May 28 1917 Born April 9 1871 Died February 24 1919 Buried at St Nazaire France with and beside our soldier boys with full military honors This tablet placed by her friends

Change in Distribution of Nursing Service—The Detroit Department of Health in its *Weekly Health Review* for July 10 gives the following changes in the distribution of nursing service rendered in November and April infant welfare November, 29 and April 44 per cent school, November, 26 and April, 19 per cent, tuberculosis November 4.3 and April, 6 per cent, contagion November 26 and April 17 per cent, and other service November, 14 and April, 14 per cent There was a material increase in infant welfare work and in tuberculosis but in the work in schools and in contagious diseases there was a relative decrease

MISSOURI

Public Health Street Car—The first public health street car in the United States traveled the streets of St Louis the last week in June standing at a designated location on successive days so that the people of the communities could visit it and learn the lessons taught therein regarding tuberculosis The exhibit is being made by the Tuberculosis Society of St Louis and more than 5,000 persons visited the car during the week

Centennial Endowment Fund—The alumni and friends of St Louis University are undertaking a campaign to raise an endowment fund of $3 000 000 The centennial of the university was passed two years ago without formal recognition because of the World War The university was founded in November, 1818 as the St Louis Academy and two years later expanded into the St Louis College In 1832, the college was given a charter as a university, and the faculty of medicine was attached in 1836 The principal immediate needs of the institution are $1 500 000 to provide an income of $75 000 a year of which $60 000 is to be applied to the medical and dental schools new laboratory and other betterments for the school of medicine at the cost of $250 000 and the future needs for the college of medicine and dentistry for new clinics and new buildings $550 000 The rest of the $3 000 000 desired is for the institute of law school of commerce and finance, and the college of arts and sciences

NEW YORK

New Regulations to Prevent Anthrax—The New York City Department of Health June 16 adopted resolutions regulating the manufacture and sale of hair brushes and hair cloth These resolutions forbid the use in the manufacture of hair brushes and hair cloth of any animal hair which has not been sterilized by a process prescribed or approved by the department of health No person is permitted to bring into or offer for sale or sell or deliver in the city of New York any cloth or brush containing animal hair unless it shall have been so sterilized These regulations provide that proper sterilization shall consist in boiling the hair in water maintained at a temperature of 212 F for three hours or the placing of the hair in an autoclave in which a 10 inch vacuum is produced and live steam then turned on and kept at 15 pounds pressure for a period of three hours

New York City

Personal—Dr S Josephine Baker has been made consultant in child hygiene for the U S Public Health Service and has received a commission as surgeon in the reserve of the U S Public Health Service——Dr Jacob Sobel has been designated assistant director of the Bureau of Child Hygiene of the Department of Health——Miss Julia Stimson has been appointed superintendent of the Army Nurse Corps with the relative rank of major

Police Hospital for Brooklyn.—The committee appointed to consider the need for a police hospital has decided that the city should have such an institution The purpose of such a hospital will be to provide medical surgical and clinical treatment for the police force active or retired and

for their families A campaign for $5,000,000 will be started shortly It is estimated that the site will cost $800,000, the building and equipment, $2,500,000, and the rest will form an endowment to meet in part the cost of up-keep

Wood Alcohol Deaths—The report of the Metropolitan Life Insurance Company for the first four months of 1920 shows that there were forty deaths from wood alcohol poisoning incidental to the use of adulterated beverages During the same time there were eighteen deaths from acute or chronic ethyl alcoholism Under present conditions wood alcohol poisoning is, according to this report, a significant cause of death On the other hand, deaths from alcoholism in the narrow sense of the term numbered twelve during this period as against sixty-two for the same period of 1919 Alcoholic cirrhosis of the liver shows no deaths thus far this year, although there were seven during the first quarter of 1919

Taking Fingerprints of All Babies Advocated—Owing to the difficulties encountered in an investigation into the circumstances under which an undertaker obtained a woman's body from the morgue and buried it without the knowledge of her relatives, the suggestion made by Deputy Police Commissioner Joseph A Faurot and Acting Capt John A Ayres, that physicians filing birth certificates be required also to file fingerprints of the new-born baby is receiving open discussion by city officials It is pointed out that this would make available an infallible lifelong method of identification, would prevent the burial of a body as that of another person, would limit opportunity for fraud and guard the individual Dr Frank J Monaghan, Brooklyn, acting health commissioner, has expressed himself as favorably impressed with the plan, as it would give an identification record that would stand a legal test and would serve to identify lost children It is thought that to have the system favorably considered it will be necessary to educate the public because the mention of taking fingerprints suggests a criminal process, though it may be quite as useful in safeguarding the individual or in saving a fortune

NORTH CAROLINA

Report Profits for Children's Hospital—Out of the profits of Grove Park Inn Asheville, the owner will construct and maintain in Asheville a modern hospital for the treatment of crippled children of America on a site near Grove Park Inn on Sunset Mountain Dr W P Herbert, Asheville, will be chief of the medical staff

Colored Medical Association Meeting—The thirty-first annual meeting of the North Carolina Medical, Dental and Pharmaceutical Association was held at Rocky Mount, June 29 and 30, and Charlotte was selected as the place of meeting for next year, and the following officers were elected president Dr William C Strudwick Durham, vice presidents, W H Williams, Goldsboro, and Peter W J Burnett Rocky Mount, and secretary-treasurer, Dr Clyde H Donnell, Durham

Physician Fined for Failing to Report Births—The highest fine as yet imposed in a local court for violation of the state vital statistics law was imposed on Dr B W Tugman Warrensville, July 17 He is said to have been assessed $50 and costs in two cases of failing to report births when he was the attending physician The case was aggravated by the fact that last summer Dr Tugman was convicted and given a nominal fine and that in this instance prosecution was instigated only after repeated unsuccessful efforts had been made to get him to comply with the law

OHIO

Society Acquires Building—The Toledo Academy of Medicine has purchased the Frank H Hurd Democratic Club Building, Toledo for $42 500

Gift to Homeopathic College—It is reported that a gift of $400 000 has been made by Mr Charles F Kettering of Dayton to promote research in the College of Homeopathic Medicine of the Ohio State University

Medical Chautauqua—A medical chautauqua for physicians of Dayton and vicinity will be held at the Fidelity Building, Dayton, September 21 to 24 Among the physicians on the program are Drs Hugh T Patrick Dean Lewis and Alfred C Croftan, Chicago, Dr Walter B Cannon of Harvard University and Dr Lillie of the Mayo Clinic

Reciprocal Relations Withdrawn—At a recent meeting, the Ohio State Medical Board adopted a resolution canceling reciprocal relations with the Arkansas Eclectic Board of Medical Examiners The reason stated was that the latter board persisted in examining and licensing graduates of a nondescript medical college of Kansas City which is not recognized as an eclectic college by the National Eclectic Medical Association

Personal—Dr Stephen A Douglass, superintendent and medical director of Ohio Tuberculosis Sanatorium, Mount Vernon, has resigned to take effect September 1——Dr Thomas J Arundel, Youngstown who served in Italy during the war as dietitian and physician with the Knights of Columbus, has received from the Vatican the gold cross "Pro Ecclesia et Pontifice' in consideration of service rendered humanity and the church——Dr Harry L Rockwood has been appointed health commissioner of Cleveland

PENNSYLVANIA

Personal—Dr William K T Sahm, Pittsburgh, medical examiner for the Pennsylvania Railroad voluntary relief department, retired from active service, June 30, after an administration of thirty-four years Dr Sahm was presented with a silk umbrella by the assistants and clerks of the department and a leather traveling bag by the medical examiners of the Pennsylvania system——Dr John M Lawler, Pittsburgh, superintendent of the Allegheny General Hospital since 1918, has resigned——Dr Thomas H A Stites of the state tuberculosis sanatorium, Hamburg, has resigned——Dr Charles J Hatfield Philadelphia and T Finegan, state superintendent of public instruction have been appointed Pennsylvania members of the national advisory council of the Modern Health Crusade——Dr George S Deibert, Allentown, heads the eligible list for superintendent in the new bureau of hospitals in the department of health, Philadelphia

Philadelphia

Regulations for Barber Shops—Drastic regulations for barber shops in Philadelphia were adopted July 1, by the board of health acting on a request made by proprietors of barber shops in the central part of the city for sanitary inspection and certification of their establishments A copy of regulations will be sent to every barber shop in the city

Alcohol and Narcotic Law—The committee on medical defense of the Philadelphia County Medical Society has issued to members a formal statement which declares, "The law on prescribing alcohol and narcotics is sufficiently clear and liberal to cover all ordinary cases and occasions," and which warns members "not to bring discredit on the society and profession'

War on Narcotics—Mayor Moore will call a conference of drug manufacturers to establish measures to check the illicit traffic of drugs in this city This action was taken as a result of the discovery of $6 000 worth of drugs by members of the vice squad It was found that the drugs were being sold by 'pedlers" to addicts for $2 a 'deck' The confiscated drugs were turned over to the department of health for use in the hospitals

More School Inspectors Needed—According to statistics 15 per cent of the schoolchildren failed to qualify for promotion in June at the end of the term, and the greatest number of these failures were evidenced in the first grade The board of education has delayed in making necessary increases in the medical staff The department of health through its health centers is ready to assist in every possible way to take care of the children who need medical attention, but it cannot and should not be the means for finding the needs of the children More medical inspectors and nurses are needed Ten public school buildings have been found absolutely insanitary, and an order has been issued to the board of education to place them in better condition

City Bathhouses Insanitary—Insanitary condition exist at a majority of the recreation centers and bathhouses under the auspices of the board of recreation, according to a report on a survey of those places submitted to Director Tustin by Dr Blair Spencer physician in chief of the department of public welfare According to Dr Spencer, 270,550 persons used the public bathhouses and swimming pools at recreation centers during the week ending July 10 Measures to prevent the communication of disease through the water of swimming pools in these public bathhouses were to go into effect the week beginning July 13 Every person entering a pool shall be required to take a shower bath with a generous application of soap Bathhouse attendants will be required to make a cursory inspection of all persons entering their establishments in order to detect any appearance of disease

TENNESSEE

New Infirmary in Bristol—A fourteen-room eye, ear, nose and throat infirmary has been opened in Bristol by Dr Thomas F Staley

Personal.—Dr James J Durrett Charlottesville, Va, has entered on his duties as head of the Municipal Health Department of Memphis——Dr E B Wise has been made director of the city health department of Chattanooga, succeeding Dr Stanton H Barrett, resigned

Physicians Elect Officers—At the twenty-ninth annual meeting of the West Tennessee Medical and Surgical Association held in Jackson, the following officers were elected president, Dr William T Black, Memphis, vice presidents, Drs W B Bond, Martin, and Jesse P Baird Dyersburg, secretary, Dr Isaac A McSwain Paris and assistant secretary, Dr George R McSwain, Paris Paris was selected as the next place of meeting——At the annual meeting of the Middle Tennessee Medical Association held in Centerville, Dr John H King, Nashville, was elected president

TEXAS

Health Crusade—Since the beginning of the modern health crusade movement last year, more than 420 000 schoolchildren of Texas have been enrolled as crusaders

Library Association Incorporated—The Bexar County Medical Library Association has been incorporated at San Antonio with a capital stock of $10,000 by Drs Frank Paschal, T Lawson Moody and William A King

Personal—Dr Charles W Goddard Austin, state health officer, has been elected physician in chief for the University of Texas——Dr Charles S Gates, Austin, has been elected physician for men in the University of Texas——Dr Dru McMickin has been appointed health officer of Beaumont

Quarantine Regulation—In accordance with a modified quarantine proclamation which became law June 27, every mayor and health officer within the quarantine area has been notified that a complete rat extermination campaign must be inaugurated in the quarantine area which comprises 50 miles inland from the Gulf Coast and Rio Grande and Sabine borders and a radius of 100 miles from Galveston and Beaumont This quarantine applies to all vessels, railway trains, trucks, persons or things coming from places infected, unless satisfactory proof to the contrary be submitted to the health officer

Bubonic Plague—A six-day period of quarantine has been made effective June 22, at Sabine Pass on vessels coming from ports in Mexico reporting bubonic plague——Up to July 8, eight cases of bubonic plague had developed with three deaths at Beaumont, and at Galveston up to that time, there had been three cases of plague with two deaths——More than 20 per cent of the rats examined in Beaumont are said to have been infected with bubonic plague——The state health officer has issued an order that all health officers and physicians in Texas report by telegraph to the state board of health immediately all suspicious cases of bubonic plague——The death of a negro boy of Galveston, at Port Arthur, July 6 is reported to have been due to bubonic plague

WISCONSIN

Clinics Open—Cudahy and South Milwaukee have opened permanent children s clinics The clinic in Cudahy is held each Wednesday afternoon, under the care of Dr Earle X Thompson and that at South Milwaukee every Thursday afternoon from 3 to 4 o clock under the care of Dr Charles A Dockery——Six clinics are now being held in Beloit, namely, a children's tuberculosis clinic, an eye, ear nose and throat clinic an infant welfare clinic, a dental clinic, a clinic for nervous diseases and a venereal disease and tuberculosis clinic

Personal—Dr Gilbert E Seaman Milwaukee formerly colonel, M C U S Army, and surgeon of the Thirty-Second Division during the World War, has been nominated by the conservative Republicans as candidate for governor of the state——Dr Ernest I Bunker Grantsburg has been appointed coroner of Burnett County——Dr Robert W Blumenthal has been appointed a member of the medical staff of the Milwaukee County Dispensary, Dr Herbert C Dallwig has been appointed roentgen-ray operator, Dr John E Mulsow to the eye ear, nose and throat department, Glenford L. Bellis to the tuberculosis department and Dr Albert F Young to the department of nervous and mental diseases——Dr Neil Andrews Oshkosh sailed for Europe, July 3——Dr and Mrs Bradbury N Robinson Baraboo, sailed for Europe July 1——Dr Albert J Pullen North Fond du Lac has been elected president of the Fond du Lac County Branch of the Wisconsin Humane Society

CANADA

Liquor Issue Restricted—An order in council has been approved by the Ontario government whereby physicians are now allowed only 3 gallons of liquor at any one time in place of 10 gallons as formerly

Chair of Public Health—The University of British Columbia has received an offer from the Provincial Red Cross Society for a Red Cross chair of public health The Red Cross undertakes to pay the salary of a professor of public health for a period of three years providing the university will undertake laboratory expenses in connection with the chair

Representatives Elected—The British Columbia Medical Act requires an annual election of representatives for various medical electoral districts throughout the province The College of Physicians and Surgeons of British Columbia announces the results of the election for this year as follows Victoria District Drs Roderick L Fraser and George W Hall, New Westminster District Dr Richard E Walker Vancouver District, Drs Edwin D Carder and Vestus E D Casselman, Kamloops District Dr John S Burris and Fernie District, Dr Saul Bonnell

Christian Science Church Not Residence—A Toronto judge has ruled that a Christian science church cannot be erected on property reserved solely for residential purposes The lawyer for the church argued that as the work of the Christian science church had to do with healing and as a doctor of medicine would be allowed to practice his profession in any such house therefore the church should be so allowed Mr Justice Orde ruled that what is meant by physician in legislative enactments is a duly qualified physician as recognized by the law of Ontario

Hospital News—Toronto is still seeking sites for both an isolation and reception hospital As the present isolation hospital is situated in the eastern part of the city, Dr Charles J C A Hastings M O H is of the opinion that residents in the east end will not tolerate the erection of any more hospitals——The newly organized Western Association of Hospitals recently formed at Calgary, Alta is for the purpose of forwarding the movement for greater cooperation among the hospitals of Manitoba Saskatchewan, Alberta and British Columbia Dr Maurice McD Seymour Regina has been elected president Each province has a vice president Dr Warren of Calgary is the secretary

Personal—Dr Herbert A Bruce, Toronto has been made a chevalier of the Order of the Crown by the king of Belgium This is in recognition of services rendered Belgium during the great war Dr Bruce was one of twelve consulting surgeons for the British army——Dr John G Cunningham Toronto has been appointed head of the new bureau of industrial hygiene just created by the Ontario Board of Health——Dr Helen MacMurchy Toronto has been appointed to take active charge of the division of child welfare in the federal department of health, Ottawa——Dr Delmer V Craig London has accepted an appointment as medical consultant on the staff of the Massachusetts Halifax Health Commission

GENERAL

Research Laboratories—The National Research Council in a bulletin just issued lists more than 300 laboratories in the United States in which fundamental research is carried on

Obstetricians and Gynecologists to Hold Annual Session—The thirty-third annual meeting of the American Association of Obstetricians and Gynecologists will be held in Atlantic City September 20 to 22 under the presidency of Dr George W Crile Cleveland

Climatologists Elect Officers—At the annual meeting of the American Climatological and Clinical Association held in Philadelphia in June the following officers were elected president Dr Carroll E Edson Denver vice presidents Dr Nelson Estes Nichols Portland Me and Gordon Wilson Baltimore and recorder Dr Cleveland Floyd Jelison

Railway Surgeons to Meet—The thirtieth annual session of the New York and New England Association of Railway Surgeons will be held at the Hotel McAlpin New York October 19 under the presidency of Dr William P Coley New York chief surgeon of the New [illegible] Dr George W Crile Cleveland will [illegible] surgery

Warning—It is reported from Fort Morgan, Colo, that a man, signing his name as J P McKeen, is going through the country selling contracts with the Fleming Supply Company, Kansas City, Mo, whereby the purchaser is supposed to get automobile supplies at factory cost for the price of the contract, which is $100 for five years This company does not exist at the address given The officials of Morgan County, Colo, are said to be holding a warrant for the arrest of McKeen who has been working chiefly among physicians

Mississippi Valley Conference on Tuberculosis—The eighth session of the Mississippi Valley Conference on Tuberculosis will be held in Duluth, September 2 to 4 The Chicago Tuberculosis Institute is endeavoring to arrange a trip to Duluth and return by boat, leaving Chicago, August 30, at 1 30 p m, arriving at Duluth, September 2, 7 30 a m leaving Duluth, September 4, 11 p m and arriving in Chicago, September 7, 10 30 a m Reservations may be made and other information obtained by applying to James Minnick superintendent, Chicago Tuberculosis Institute, 8 South Dearborn Street, Chicago

Public Health Meeting—The American Public Health Association will meet in San Francisco September 13 to 17 Special cars will leave from Boston and New York on September 7, connecting with a special train leaving Chicago, September 8 The program will include the following entries a symposium on the relative functions of official and non-official health organizations, western health problems, narcotic control, food poisoning, organization for child hygiene, mental hygiene and health centers The foregoing subjects and others will be distributed among the following ten sectional groups General Sessions Public Health Administration Laboratory, Vital Statistics, Sociological, Sanitary Engineering, Industrial Hygiene, Food and Drugs, Personal Hygiene, and Child Hygiene

Bequests and Donations—The following bequests and donations have recently been announced

Boston Floating Hospital Sharon Mass Sanatorium and Quincy (Mass) City Hospital each $2 000 by the will of Daniel F Chase Quincy

Methodist Hospital Philadelphia $5 000, by the will of Charles W Harding

Nyack (N Y) Hospital $1 000 by the will of Justice Ernest Hall

Locust Mountain Hospital Shenandoah Pa donations of $2 500 by four physicians of Shenandoah and one of Pottsville Pa

The Zionist organization a donation of $18 500 for the development of medical and health service in Palestine by Mrs Nathan Strauss and $100 000 for a health and research department of the Hebrew University of Jerusalem a donation by Mr Nathan Strauss New York

For the Children s Hospital project of the Mystic Shrine a donation of $7 000 by Retiring Past Potentate William Freeland Kendrick Philadelphia

Bridgeport (Conn) Hospital $10 000 by the will of William F Armstrong

Rockefeller Institute Appointments—The board of scientific directors of the Rockefeller Institute for Medical Research announces that Dr Winthrop J V Osterhout Cambridge, Mass, has been appointed a member of the board, succeeding Dr Theodore C Janeway, deceased——The following associate members have been made members Dr Alfred E Cohn, medicine, Dr Francis Peyton Rous, pathology and bacteriology, Dr Donald D Van Slyke, chemistry The following associates have been made associate members Dr Francis G Blake medicine, and John H Northrup experimental biology——The following assistants have been made associates Dr James H Austin medicine, Harry W Graybill, animal pathology, Dr William C Stadie, medicine——The following have been made assistants Miss Helen L Fales, chemistry, Dr Philip D McMaster, pathology and bacteriology, and Miss Marion L Orcutt, animal pathology——The following new appointments were announced Harry Clark, associate member in pathology and bacteriology, Pierre L du Nouy associate member in experimental surgery, Dr Paul H de Kruif and Lloyd D Felton, associates in pathology and bacteriology, Dr Rudolph W Glasser, associate in animal pathology, Drs Carl A L Binger, Ralph H Boots and Charles P Miller, Jr, assistants in medicine, Dr Louis A Mikeska, assistant in chemistry, Eugene V Powell, assistant in roentgen ray, Dr Leslie T Webster, assistant in pathology and bacteriology, Drs Goronwy O Broun and Andre L E Gratia Miss Katherine M Dougherty and Mr Thomas J LeBlanc fellows in pathology and bacteriology, Dr Giovanni Martinaglia fellow in animal pathology, Mr Henry S Simms, fellow in chemistry——Dr Marshall A Barber associate in pathology and bacteriology has accepted a position with the U S Public Health Service to do field work in the malaria research laboratory Memphis, Tenn——Miss Angelia M Courtney, assistant in chemistry has accepted an appointment to do chemical research work in the University of Toronto——Dr Carl Ten Broeck, assistant in the department of animal pathology, has been made associate professor of bacteriology in Peking Union Medical College——Mr Earl B Clark, assistant in chemistry, has accepted a position with the bureau of standards——Dr Ferdinand H Haessler, assistant in pathology and bacteriology, has been appointed resident pathologist to the department for nervous and mental diseases of the Pennsylvania Hospital, Philadelphia——Dr Arthur B Lyon, assistant in medicine, has resigned to enter private practice

Colonel Russell Resigns to Take Up New Duties—Col F F Russell has resigned from the Medical Corps, U S Army, to take charge of the newly organized Division of Public Health Laboratories of the International Health Board of the Rockefeller Foundation Colonel Russell's resignation from the army is to be regretted so far as the medical corps is concerned He has been recognized as one of its most efficient officers, he has the rare combination of scientific spirit and executive ability and through this combination has accomplished much He has developed and stimulated the scientific spirit in others so that the accomplishment of the army in scientific matters has been by no means inconsiderable In 1908 Colonel Russell introduced prophylactic vaccination against typhoid fever in the army The well-known Russell double-sugar medium was a product of this period and was the first instance in which more than one indicator of the bacterial action was used in the same tube In 1903, he collaborated with Hiss in the study of dysentery bacilli and described the organism later known as the Hiss-Russell or "Y," type of the dysentery bacillus On the death of Major Carroll in 1907, Colonel Russell was placed in charge of the laboratories of the Army Medical School, with which he has been more or less associated ever since In 1912 Colonel Russell went to Porto Rico to assist in suppressing an outbreak of plague In 1914 he went to Vera Cruz as a member of the expeditionary force and directed the laboratory service of the medical department In 1915-1917 he served on the Canal Zone and planned and built the model board of health laboratory In administrative lines he has been especially active in building up the Army Medical School and department laboratories from the point of view of equipment personnel and output For some years he has advocated the placing of the school on the grounds of the Walter Reed Hospital, and the development of a symmetrical scheme for graduate medical education, combining both hospital and laboratory facilities This project is about to be realized, largely through the active support of Surgeon-General Ireland While there is universal regret in the medical corps over the loss of Colonel Russell's services to the army, it is realized that his ability and his army experience will be especially valuable in his new position He will retain a commission in the reserve corps

FOREIGN

Cholera in Japan—A press telegram from Tokyo states that 500 new cases of cholera had been reported in Japan in the previous week

Prize Awarded to Inventor of Cinematic Amputations—The Ribero prize of 20 000 lire was awarded recently by the Turin Accademia di medicina to Dr G Vanghetti of Empoli, Italy for his method of cineplastics, the utilization of the muscles in the amputation stump to actuate artificial limbs

Testimonial to Roux of Halle—Dr W Roux, professor of anatomy at the University of Halle known for his research on the mechanics of evolution and functional adaptation of parts, recently reached his seventieth birthday, and a prize was founded in his honor by the city of Halle and another by the minister of arts and sciences His pupils also collected 31 000 marks toward a special institution for research on evolution, and two *festschrifts* were presented to him

Deaths in Other Countries

Dr M Anzoátegui, a leading physician of Salta province, Argentine, at one time minister of the treasury, aged 50—— After a long illness Dr Terroba y Solares, ophthalmologist of Mexico City——Dr David Berry Hart, lecturer and writer on obstetrics and gynecology at the School of Medicine of the Royal Colleges, Edinburgh, honorary member of the American Gynecologic Society aged 69——Dr P W Heiberg, one of the pioneers in modern surgery in Denmark, aged 80.——Dr B Rojas Carvallo of Santiago Chile, aged 66——Dr G Klein, professor of gynecology and obstetrics at the University of Munich and medical historian——In Cuba, Dr M Riva and Dr G J Benasach, both of Havana

Government Services

Honor to Captain Pleadwell

The order of Commander of British Empire (military division) has been conferred on Capt Frank L Pleadwell, M C, U S Navy

Departments of Public Health Service Move

Arrangements have been made whereby several bureaus of the U S Public Health Headquarters in Washington will be all located in the building formerly occupied by the U S Shipping Board at Sixth and B Streets The bureaus which will be thus transferred are the hospital venereal disease, Marine Hospital dispensary, industrial hygiene and statistical These various bureaus have heretofore been located in various parts of Washington, D C, but will in the future be located in the Shipping Board Building

Airplane Ambulance

A new design of airplane ambulance, with a fuselage designed especially for the transportation of the sick and wounded, was recently completed at the Air Service Experimental Station, McCook Field Dayton, Ohio The basis for the new ambulance is the DH-4 type of airplane, but many modifications have been made to increase its stability and safety The depth of the fuselage behind the pilot's seat has been increased, and this space has been divided into upper and lower compartments, each of which provides space for one litter patient Above the upper compartment is a cockpit provided with a portable seat for the use of the medical officer On its trial flight, the ambulance negotiated 130 miles in sixty-five minutes and made the return trip in 105 minutes Several ambulances of the new type are being constructed for use on the Mexican border

Medical and Surgical History of the World War

Among the important work under way in the office of the Surgeon-General of the Army is the preparation of the medical-surgical history of the World War Col Charles Lynch, M C, is in charge of this work and is assisted by Colonels Brook Siler, Moncrief, Wolf, Oliver and Major Kramer of the Surgeon-General's staff

The history will include an account of the work done during the war in a great many branches of modern scientific medicine and surgery Subjects to be presented and medical officers who will present such subjects are set out in the following

Administration Western Front Lieut Col Louis C Duncan
Administration United States Lieut Col Fielding H Garrison
Narratives Col Bailey K Ashford
Sanitation Col W P Chamberlain
Sanitation Western Front Col Haven Emerson
Internal Medicine Gen W S Thayer
Surgery Gen John M T Finney
Neurology Col Thomas W Salmon
Oto Rhinology Lieut Col Joseph R McKimon
Statistics Maj Albert G Love
Pathology Col William H Welch
Hospitals Lieut Col Casey A Wood
Communicable Diseases Col Hans Zinsser
Gunshot Wounds Col George E Brewer
Aviation Col Thomas R Boggs
Gas Defense Col H L Gilchrist
Reconstruction Col Frank Billings
Ophthalmology Col George E deSchweinitz

It is expected that the history will contain about fifteen volumes, and according to present tentative plans the respective volumes will cover the following titles

I Introduction
II Administration—United States
III Administration—Western Front
IV Statistics Mathematician Interpretation of Data (Anthropometry)
V Sanitation in the United States Including Possessions
VI Camps and Cantonments
VII Hospitals
VIII General Medicine
IX Neurology
X Surgery
XI Gunshot Wounds
XII Pathology
XIII Physical Reconstruction
XIV Air Service
XV Chemical Warfare

Foreign Letters

PARIS

(From Our Regular Correspondent)

July 1, 1920

Death of Simonin

Dr Simonin, director of the army medical school at Lyons recently died at the age of 56 In the early part of the World War Dr Simonin was severely wounded and taken prisoner and he wrote an affecting account of his experiences during this captivity

Congress of Alienists and Neurologists

The twenty-fourth Congres des medecins alienistes et neurologistes de France et de pays de langue française will be held at Strasbourg, August 2-6 1920 Dr E Dupre clinical professor of mental disorders and diseases of the brain on the Paris medical faculty and Dr Pfersdorff professor of psychiatry on the Strasbourg faculty are president and vice president respectively of the congress The topics listed for formal discussion include postoneiric psychoses opened by Dr Delmas, occupational factors in mental disorders opened by Dr Coujonlou, and the lesions of the thyroid gland in exophthalmic goiter, opened by Dr Roussy

The Work of L'Œuvre Grancher

In a communication to the Academie des sciences morales et politiques Dr Armand-Delille recently stressed the value of familial placement of children in child welfare work Basing his arguments on the results obtained by L Œuvre Grancher, which has placed more than 2000 children, Dr Armand-Delille insisted on the superiority of this method first and foremost from the moral point of view because it most nearly approaches the conditions of normal family life from the hygienic point of view because it avoids the danger of infectious diseases the complications of which are particularly fatal to institutional children especially in nurseries and baby homes from the economic point of view because it does not require large sums for buildings and the salaries of a specially trained personnel always difficult to find, from the social point of view because the child thus takes a liking to a trade or if a girl to housekeeping

Finally, familial placement offers the advantage that if the family has been chosen with the desirable discernment the child finds an educational and moral environment superior to that in the average run of family The only necessary condition therefore to demonstrate the incontestable superiority of familial placement is that the choice of the family be made carefully under competent supervision

The Truth About American Prohibition

Under the foregoing title the *Ligue Blanc* official organ of the Ligue nationale contre l'alcoolisme published an interesting and expedient article As a matter of fact for some time past the daily press has carried foreign dispatches tending to prove that prohibition in the United States has had no social effect except to encourage the use of more deleterious drugs morphin cocain ether and methyl alcohol the latter agent is said to have caused poisoning en masse It is also claimed that prohibition has caused in reality an increase of alcohol consumption and of crime that it has provoked popular uprisings and brought on a strike of workmen would be malcontents because they were no longer able to drink freely It is said that a great number of American workmen recent immigrants have returned to their native countries where they can drink again at will One reads that on the roads leading to Cuba where alcoholic beverages may be freely obtained are encumbered with motor vehicles [illegible]

a short course of inebriety, that 2 miles off the coast a floating island has been built where thirsty Americans can become inebriated in all privacy There is not space enough to relate all the tiresome stories which are printed, without even a wrinkling of the forehead, by the public press under subsidy of an international syndicate of liquor merchants Attentive reading suffices to convince one that such news is made of whole cloth One thing is certain, that this European newspaper campaign has enormous financial support, but unified direction, the semblance of sincerity and tact are lacking These lies are devoid of even the most elementary scientific logic, which alone could bring illusion to the uninformed readers

The *Etoile Bleue* thinks that it is incumbent on independent journals to publish the truth about prohibition supported by the best possible proof It quotes from reputable and reliable papers to show certain good effects of prohibition, among others the decrease in arrests for drunkenness, the diminution of poverty and the increase in savings and bank deposits This article is all the more interesting since the antiprohibition campaign recently found an echo in a medical journal The *Gazette des hopitaux*, in fact, published a letter from an American correspondent who claims that prohibition was forced on the country, as it were by surprise, by certain radical elements which very cleverly knew how to profit by the favorable circumstances created by economic exigencies of the war and by the absence of a large number of voters

Visit of Spanish Physicians

A group of Spanish physicians, including Dr Nuñez Grimaldos, editor of *Los Progresos de la Clínica* and *Plus Ultra*, recently visited the Paris medical faculty and the Pasteur Institute

LONDON

(From Our Regular Correspondent)

July 3, 1920

Annual Meeting of the British Medical Association

The eighty-eighth annual meeting of the British Medical Association, held at Cambridge, was the first complete meeting held since the war during which the scientific part of the annual meeting was suspended At the meeting last year in London this was resumed, but the meeting was not a complete one, as the number of sections was greatly reduced Before the war the next annual meeting had been arranged to take place at Cambridge Hence the present function can be regarded as a postponed one and its importance was increased by this fact The ample accommodation provided by the university, the beauty of the surroundings, and the historical interest of this famous seat of English learning made an ideal setting Among the distinguished foreign visitors present were J Bordet, president of the Faculty of Medicine and director of the Institut Pasteur, Brussels, Piero Giacosa, professor of materia medica and experimental pharmacology, Turin, Dr Simon Flexner, director of the laboratories of the Rockefeller Institute, New York, Dr John J Abel, professor of pharmacology, Johns Hopkins University, Baltimore, Dr R R Browne, representative of League of Red Cross Societies, Geneva, Dr Harold Feil, New York, Dr Robert W Hegner, director of the department of medical zoology, Johns Hopkins University, and Dr Alfred Hess, professor of clinical pediatrics, Bellevue Medical School, New York

THE PRESIDENT'S ADDRESS

The president, Sir T Clifford Allbutt, in his address, entitled "The Universities in Medical Research and Practice," asserted that the universities, ancient and modern, from Alexandria to Edinburgh, have made the professions He sometimes thought that the "classics" would have to come back as a "modern side' The university stood for each student for something larger than the field of a particular calling, for a more comprehensive design We must be trained not only to handle particulars but also to handle ideas Narrow specialization was found in medicine, as in other arts, among people of narrow culture, never among the Greeks, but abundantly among the Egyptians, the Romans, the third century folk, and today in the tribes of Melanesia Specializing was prone to be quackish, and had been said to be "only an unequal distribution of ignorance" He pleaded for a study of comparative pathology Light for the study of the generation of diseases in man must be obtained in part by a study of diseases in animals and plants Discussing the future of the physician, under the projected socialization of the profession, he considered that an official physician would be as alert and progressive as a country parson whose service is not much kindled by the chances of promotion, while to shift an official physician from place to place would be to cut the inner threads of those intimacies which we now declare to be clues to the detection of diseases at their sources Yet, as things are, the independent practitioner is isolated, even in a town he is likely to make a little orbit for himself, he lacks mental incentive, and gradually lets slip occasions of scientific reunion

At the conclusion of his address the president was presented with his portrait, the work of Sir William Orpen, which had been subscribed for by a great number of physicians Sir Norman Moore president of the Royal College of Physicians, who made the presentation, said that Sir Clifford Allbutt deserved to rank with his great predecessors in the chair of medicine at Cambridge, who included Glisson, the celebrated anatomist

THE MEDICAL CURRICULUM

In the Section on Medical Education the introductory address on The Place of Preliminary Science in the Medical Curriculum" was delivered by Sir George Newman principal medical officer of the ministry of health He considered that four reforms were needed in the medical curriculum 1 A lightening of the curriculum at both ends In other words, fuller preparation in science before entering the medical school, and a postponement of certain specialties to the postgraduate period 2 A fuller study of the sciences preliminary to medicine and a closer application of these sciences to clinical work Above all there was great need of biology (anatomy and physiology) 3 Development of clinical teaching of university standard, particularly in relation to the beginning of disease, the closer integration of various forms of clinical practice and of clinical with intermediate study, concentration on the protean diseases of tuberculosis malaria, venereal and malignant diseases, and an understanding of the social side of therapeutics as well as the social side of aspects of disease 4 Further state aid though with a minimum of state control More teachers, better teachers and better-paid teachers were necessary

In a paper on the teaching of anatomy, Prof Arthur Keith made a novel and startling plea Every medical teacher should keep his knowledge in such a state that, if called on, he could resume or assume the role of a general practitioner This was the only guide by which the teacher had as to what his pupils should know He believed that he had himself gained in every way by keeping up his knowledge of general medicine If there was compulsory training of the physician, why not of the medical teacher? At every great medical school every teacher of anatomy and physiology should hold occasional clinical appointments up to their thirty-fifth year Another reform needed was in the scope of textbooks which strove to serve as works of reference for the research as well as the pass student The greatest sinners were the anatomists

and physiologists, their books could be reduced by half with an improvement in the education of the man who is to practice general medicine ' He requires for diagnosis a knowledge of the exact situation and action of the parts of the body But less than half of our textbooks were devoted to this It was not so with the earlier textbooks, which were keys to the living body Examination papers were a wearisome repetition of "describe" this and "describe' that, as if the student could apply pure description or obtain any assistance from it in practice Anatomy could be made a living part of medicine if only the teacher would ask himself Could this fact help me in diagnosis or treatment? If not let it repose in the comfortable storage of works of reference until it has proved its right to enter the currency of applicable knowledge

THE REPRESENTATIVE MEETING

At the meeting of the representative body, many subjects of great importance were discussed It was decided to increase the annual subscription from the present one of $10 50 to $15 75 The reason for the increase was not only the great increase in the cost of producing the *Journal* in all directions, but also the need for adequate funds to carry on the forward political policy of the association The meeting resolved to ask the council to consider the desirability of excepting from the increase any member who had retired from practice or was of forty years standing, as many of these received no benefit from the political work of the association, and continued their membership out of loyalty to it

PROFESSIONAL SECRECY

A long debate took place on the question of professional secrecy which, as pointed out in previous letters to THE JOURNAL, is on an unsatisfactory footing in this country In 1915 the council of the association went fully into the question and was advised that apart from state officials, such as ministers of the crown, judges of the high court, and others placed in positions of more or less supreme importance, the only classes of persons recognized by the law courts as competent to claim to hold statements made to them involving matters of criminal import or otherwise, as absolutely inviolable from obligation to disclose were lawyers and ministers of religion But though no such universally recognized protection attached to statements made to a member of the medical profession by a patient, there was admittedly a certain degree of professional secrecy recognized as being associated with such statements although a conflict of authority existed as to the extent to which this could be carried As a result of its consideration of the subject, the council expressed the opinion that 'a medical man should not under any circumstances disclose, voluntarily, without the patient's consent information which he has obtained from that patient in the exercise of his professional duties" The chairman of the Central Ethical Committee moved a resolution identical with the preceding excepting that the words "more particularly with regard to venereal disease' were added The provision by the state of centers for the treatment of this disease has raised in a new form the question of professional secrecy The chairman recognized that there must be exceptions to the rule A physician might receive an order from a court to divulge In such a case an individual physician might feel that he should defy the order and take the consequences A physician might feel it his duty to divulge a professional secret in order to prevent the committal of a crime or injury to a third person In the discussion a member told a story which illustrates the unsatisfactory state of the law on the subject On the grounds of professional confidence he refused to answer a question in a court Some time afterward he was attending the judge who said to him 'You know I could have imprisoned you last week for not answering that question, but if you had I never would have had you in my house as a physician again' The motion was carried.

SECRET REMEDIES

A resolution was carried that a physician should not make use of or recommend any remedy the principal ingredients of which were not disclosed to the profession The chairman of the Central Ethical Committee said that it had been brought home to the committee that there was growing laxity in this matter on the part of a large number of members of the profession They had taken a very strong public line in urging Parliament to bring in legislation to control the sale of registered preparation with the perpetual protection of trade marks and other similar practices which they regarded as inimical to the public interest But if they found that the advertisers were able to say truthfully that physicians themselves were guilty of gross remissness in regard to that question, they had the ground cut from under their feet for any effective action

MADRID

(From Our Regular Correspondent)

June 12, 1920

Tabes and Eye Disorders

Professor Fuchs recently delivered at the Real Academia Nacional de Medicina of Madrid an excellent lecture on "The Relations Between the Eye and Tabes" This disease is preceded by premonitory symptoms, which Fuchs divides into (1) *pupillary signs* (2) *paralysis of the motor oculi*, and (3) atrophy of the optic nerve

PUPILLARY SIGNS

1 Absence of the light reflex (Argyll Robertson sign) It is well known that the normal pupil reacts by contraction to the light as well as to convergence and accommodation The first contraction is reflex while the contraction during convergence and accommodation is a synergic or associate action, for the nuclei of the abducens nerves which direct the convergence (i e., rule the external recti and also the accommodation, that is the ciliary muscle and the sphincter of the iris) act at the same time, while the contraction produced by the light requires the stimulus of a centripetal nerve (optic) and one centrifugal (abducens) The combination of both forms a reflex act The dilatation of the pupil by a sensory sensorial or psychic stimulus is also reflex The centripetal branch is formed by sensory nerves and the centrifugal by sympathetic nerves which receive the stimulus of the former through the ciliospinal center of the lower cervical part of the spinal cord During the absence of the pupil reflex the pupil does not react to the light but it contracts during convergence and accommodation This lack of reflex is one of the earliest and most common signs of tabes which is found in 70 or 80 per cent of the cases as well as the absence of the patellar reflex While the location of the lesion that breaks the reflex arc is not known positively it seems most probable that it is located in the tract of the pupillary fibers of the optic nerve on their course to the nuclei of the abducens namely in the vicinity of the aqueduct of Sylvius along the posterior longitudinal bundle When there is total lack of reflex the lesion is located in the abducens itself either in the nucleus the nerve or its endings In the cases seen in the dispensary the total immobility is the terminal stage of the reflex although in other cases the former is present as such from the very beginning In tabes total immobility is three times less common than reflex immobility Reflex immobility is also found in general paresis (20 per cent) and in brain syphilis (10 per cent) while it is exceedingly rare in other nerve affections Reflex immobility is therefore an almost exclusive sign of syphilitic or parasyphilitic infection of the nervous system

2 Miosis This is the second important sign of incipient tabes, and is found in about one half or one third of the cases with reflex immobility Miosis with normal pupillary reaction is not a sign of tabes, being congenital, senile or due to chronic intoxication It is due to the inaction of the dilator through lack of stimulus Under normal conditions the stimulus of the centripetal nerves involves, through the sympathetic, a certain degree of permanent contraction of the dilator If the stimulus does not reach the nerve centers (narcosis, sleep, etc), the contraction of the dilator stops and the pupil closes In spinal miosis the cause seems to be the degeneration of the ciliospinal center, which prevents the transmission of the stimulus from the centripetal nerves to the sympathetic and then to the dilator

3 Anisocoria (pupillary inequality) This also is common in tabes, and is due to a lesion of the centrifugal abducens or sympathetic nerves It is not so important as the lack of reflex as it is less common in tabes (one fourth of the cases), and because of its being found in other conditions and even in normal cases

OCULAR SIGNS

The paralysis of the motor nerve (in 20 per cent of tabes patients) appears long before the ataxia The features which characterize the paralysis of the motor oculi in tabes are its temporary character, at least in the beginning, its remissions, and the different degree of paralysis in the muscles supplied by these nerves, the transmission of stimuli to the levator palpebrae superioris, the conquering of the paralysis by an effort of the will, and the insignificant part played by the diplopia In the tabetic paralysis, the lesion may be in the region of the nuclei of the motor oculi below the aqueduct of Sylvius and the floor of the fourth ventricle We deal with degeneration processes, a proliferation of the ependyma with sclerosis of the underlying gray matter, followed by atrophy of the efferent nerves In rare cases, the lesion is found in the nerve trunk itself or the muscle endings

ATROPHY OF THE OPTIC NERVE

Atrophy of the optic nerve is the most frequent complication and ends unavoidably in blindness It is to be feared all the more, since through its occurring at the beginning of tabes, it may blind the patients for many years It is very exceptional for the atrophy to occur in the paralytic state, so that a patient with ataxia needs not fear to become blind, and in turn those with optic atrophy need not fear ataxia until much later Optic atrophy attacks from 10 to 15 per cent of all tabes patients—chiefly men in the prime of life This complication is very uncommon among women Infantile tabes, as a sequel of hereditary syphilis, is very rare, but it is accompanied almost always by atrophy of the optic nerve The atrophy does not occur at the same time in the two eyes, but very seldom is a case found in which the atrophy remains unilateral The ophthalmologic signs are far from being characteristic, the only peculiarity being that in tabetic atrophy the disk is pale at a time when the patient is not complaining as yet about his eyes The descending atrophy is accompanied by other symptoms The pallor of the disk shows that the degeneration occurs in the anterior ending of the optic nerve in the peripheral bundles The first symptom of the loss of vision is the retarded adaptation to darkness, afterward the acuteness and the visual field diminish for the perception of some colors, as red and green, while the perception of form remains Whatever may be the relation between the central visual acuteness and the visual field, the disease always ends in complete blindness in a period that varies from a couple of months to twenty or more years Tabes patients are syphilitic cases whose infection seems mild Those having frequent syphilitic manifestations are not threatened by tabes, and that is the reason why this condition is never seen in those who have suffered syphilitic uritis or perforated palate The oculist is frequently the first one to diagnose tabes When this is detected in its incipient stage, there should be made a general examination of the patient and a blood and cerebrospinal fluid Wassermann test, determining, also, in the cerebrospinal fluid the globulins, lymphocytosis and the albumins by the colloidal gold test If the blood and cerebrospinal fluid tests are positive, there is danger of tabes or general paresis, and there must be instituted a vigorous treatment until the tests become negative When these diseases have become apparent, the treatment is usually rather inefficacious, and although other symptoms may improve, the action on the optic nerve is practically nil The failure of the specific treatment in parasyphilis is explained by the special conditions of the blood supply of the nervous system The meninges are rich in vessels which are in contact with the surrounding connective tissue, and therefore the blood and the medicinal substances contained in it can pass freely from the vessels to the meningeal tissue In the nervous tissue, on the contrary, the vessels are surrounded by a sheath of neuroglia that seems to offer an insurmountable barrier to some substances Syphilitic affections locate by choice in the meninges, while with parasyphilis the spirochetes are found in the nervous tissue itself and therefore are not accessible to drugs This is the reason why the introduction of remedies directly into the cerebrospinal fluid has been suggested The success with other symptoms of tabes lends hope that this method may prove effective in the atrophy of the optic nerve

BERLIN

(From Our Regular Correspondent)

June 28 1920

Aftermath of the World War

The tremendous political, social and economic disasters which were brought on the German people by the war, by the treaty of peace and the revolution have had special influence on the medical profession, the public health service and medical science

OVERCROWDING OF THE MEDICAL PROFESSION

Many years before the war the medical profession of Germany was overcrowded, this evil has been markedly increased as a result of the war and the peace treaty The losses of German physicians on the battlefield and through other effects of the war are inconsiderable as compared to the factors which have increased the absolute or relative overcrowding of the German medical profession According to the official casualty lists, 1 325 physicians died from causes of action in the line of military duty Opposed to this decrease however, is first of all the decrease in population of the present German territory At the beginning of the war, Germany had a population of approximately 68 000 000 Dr Hugo Prinzing a leading statistician, estimates that from the beginning of the war up to Jan 1, 1919, 4,800 000 infants were born in Germany, 1,800,000 men were killed or died in military service, 5 500,000 civilians died, and about 500,000 emigrated during the same period To these losses, 3,500,000 should be added for the loss of Alsace-Lorraine, the Polish districts and the provinces of Posen, West Prussia and East Prussia, and the northern part of Schleswig Even assuming that upper Silesia and the doubtful districts of East Prussia do not revert to Poland Germany will have a population of about 61,500,000 According to figures in the German medical directory, about 1,600 physicians lived in the lost territory, of these, at least 600 were ejected or voluntarily returned to Germany from the new French and Polish possessions Whereas, before the war there were 34 000 physicians in Germany with a population of 68,000 000, there are today 32,000 to 61,500,000 inhabitants, evidently a considerable

increase in the ratio of physicians to inhabitants, to the disadvantage of the former This factor, already of deplorable consequence to the economic status of physicians, will in the future prove almost catastrophic because of the inordinate increase during the last year in the number of medical students, whose ranks will be further augmented in succeeding years During the war, it was imperative to increase the number of trained medical assistants because of military necessity, and the entrance examinations were made much easier What an enormous student body was thereby constituted during the fifth year of the war is now startlingly apparent in the lecture rooms of the medical schools There has been further accession from the ranks of other vocations, as a result of the political upheavals that forced many to give up their former callings and to elect the study of medicine which for one reason or another struck them as the most suitable. Statistics recently compiled show that the number of medical students has increased from 11,000 in 1913 to 22,000 today Since it can hardly be assumed that any considerable portion of this multitude will fail to reach the goal, it must be expected that in a few years the number of physicians will increase to 54,000, or eight physicians per ten thousand of the population, as compared with five per ten thousand in 1913 Although this unfavorable disproportion in itself represents a restricted earning capacity, it can readily be understood that the poverty of the German people will have even worse influence on the economic status of physicians

SICKNESS INSURANCE SOCIETIES

By the extension of sickness insurance, even worse conditions are awaiting the krankenkassen (sickness insurance societies) physicians, who constitute the majority of the German medical profession Since the greatest enemies of insurance physicians were to be found in the ministry (especially ministers Bauer and Frässdorf), it was anticipated that the representatives of the social democratic party in the new government would very soon increase the existing disparity between krankenkassen fees and medical services Soon after the revolution of Nov 9, 1918, the provisional government extended the compulsory insurance act to include all employees with an annual income up to 5 000 marks, instead of 2 500 as heretofore If one remembers that the number of krankenkassen members rose from 5,400,000 (9 per cent of the population) in 1885, to 20,000,000 (about 30 per cent) in 1914, and that the membership was further greatly augmented by this regulation of December, 1918, he can readily understand that the private practice of physicians had shrunk considerably even then Although objections were naturally raised by the medical profession and by statesmen, the new government did not rest content with this extension of compulsory insurance but a few weeks ago it suddenly decided to include all employees with an income up to 20 000 marks, the latter figure was reduced to 15 000 marks by the national assembly as a result of a storm of protests from the medical profession and insured persons alike But even under this provision at least 90 per cent of the population was drawn into the kassen leaving a bare 10 per cent for private practice Physicians who had joined the Leipziger Verband therefore appealed to the government with the request that the prevailing scale of fees for krankenkassen physicians should be revised in conformity with the changed conditions failing which the physicians would consider their contracts with the krankenkassen as canceled and would treat the sick only as private patients under the terms of the general regulation of fees In view of the firmness and unanimity of the medical profession the government was forced into negotiations, which have not yet been concluded

So far as results are known, representatives of the medical profession virtually obtained concessions for the introduction of so-called free selection of the physician (which will admit to the kassen practice all physicians who register their intention under certain conditions) and an increase in the fees Regarding the latter factor, it may be stated that the medical representatives demanded an annual capitation allowance of 46 marks, representatives of the kassen have hitherto been willing to concede only 26 marks If one considers the services which physicians must generally render for this sum the demands will certainly not seem excessive From a general psychologic standpoint it will be understood that for this fee the members of the kassen do not always receive the services to which they believe they are entitled To realize the necessity of improvement in the status of physicians under the social insurance plan allowance should be made not only for the aforementioned increase of the insurance beneficiaries but also for the conceivable introduction of family insurance whereby the members of the employees' families will also come within the sphere of social insurance, and consequently of kassen practice

Marriages

HERMAN ANDERSON GAILY, Baltimore to Miss Mary Elizabeth McConkey of McClellan Heights York, Pa June 17

MATHEW TAYLOR MORTON Estherville Iowa, to Mrs Townsend of Monroe Iowa, at Spirit Lake, Iowa, recently

ROBERT LOUIS LEVY to Miss Beatrice Strauss, both of New York City, at Mount Kisco, N Y, June 29

LEE HERMAN KIEL Sioux Center Iowa, to Miss Jennie DeLong of Orange City Iowa, recently

WILLIAM VESTAL THORNBURG Yale Iowa, to Miss Adele Fonaldi of Des Moines, Iowa, June 30

GEORGE WASHINGTON BONER, Washington, Ind, to Miss Alice Dickens of Indianapolis June 28

WALTER LEWIS ALLESPACH Buffalo to Miss Jean Halliday of Victoria B C at Toronto June 16

HARRY JAY PITTOCK to Miss Mae Vergoon, both of Ingleside Neb at Hastings Neb, May 12

ROBERT DOW FORBES Seattle to Mrs Mary R Bradley of Winnipeg Manit, at Seattle May 7

JAMES WOODROW WILSON Riverside, Iowa, to Miss Maude Armstrong of Chicago recently

WILLIAM LA ROY HORNADAY to Miss Clemantine Wolf, both of Des Moines Iowa recently

FRANK W PLEHN to Miss Elpha Peters, both of Scottsbluff, Neb in Omaha, May 3

CLARA LOUISE HORNER Camden, N J, to Rev J C Rodger of Shanghai China May 22

GREENE HAMPTON SMITH to Miss Annie Merle Farrar both of Blocton, Ala June 16

GOTTLIEB WERLEY to DR BESSIE LUCRETIA SWEET both of El Paro Texas July 3

EDWARD CARSON ABBOTT Omaha, to Mrs Alma Healey in Lincoln, Neb April 10

JAMES N DOWNS to Miss Mary B Stauffer both of Bloomington, Ill recently

BLASE COLE Newton N J to Miss Betty B Kerr of New York City April 16

ERNEST KEYES CULLEN to Miss Charlotte M Macklem both of Detroit April 28

HARRY E MCKIBBEN Hector Minn to Miss Anna Edstrom of Omaha April 10

MYRON ORMELL HENRY to Miss Lucile Fisher both of Minneapolis April 14

LEON WADE MARTIN to Miss Eleanor Marie Pickel both of Chicago July 7

SAMUEL MARMOR to Miss Ethel Perlman both of Chicago recently

BENEDICT ARON to Miss Ida Edith Cohen both of Chicago July 1

Deaths

Frederick Book Abbott, Capt, M C, U S Army ⊕ St Louis, Washington University, St Louis, 1914, aged 31, who entered the World War as a physician with the first Harvard Unit, and was on duty with the British Service and went overseas the second time with Barnes Hospital, No 21, and was gassed at Seicheprey in the Toul sector in 1918, had been ill ever since, and was under treatment at United States Army General Hospital, Oteen, N C, died in that institution June 30, from tuberculosis

Benjamin Robinson Schenck ⊕ Detroit, Johns Hopkins University, Baltimore, 1898, aged 47, associate professor of gynecology in the Detroit College of Medicine, from 1906 to 1910 secretary of the Michigan State Medical Society and editor of its journal, a member of the staff of Harper and Woman's hospitals, Detroit, died in Broadmore, Colorado Springs, Colo, June 30

Luther Zwingli Breaks ⊕ Terre Haute Ind, Rush Medical College, 1901, aged 41, captain, M R C, U S Army, and discharged May 4, 1919, a member of the American Academy of Ophthalmology and Otolaryngology, assistant ophthalmic and aural surgeon to St Anthony's Hospital, died in the operating room of that institution, July 10, from angina pectoris

Frank Ross Coffman ⊕ Denver, Gross Medical College, Denver, 1890, aged 51, once health commissioner of Denver, and vice president of the Colorado State Board of Health, local surgeon of the Denver and Rio Grande system and health officer of Minturn and Eagle County, Colo, a specialist in proctology, died in Los Angeles, April 27, from heart disease

Charles McVea ⊕ Baton Rouge, La, Tulane University, New Orleans, 1893, aged 51, president of the Louisiana State Medical Society in 1909, a member of the house of representatives for one term and for two terms state senator, Captain, M R C, U S Army, and discharged Dec 10, 1918, died, July 5, from chronic interstitial nephritis

Eugene Alexander Neely, Memphis, Tenn, Memphis, Tenn, Hospital Medical College, 1886, aged 57, formerly professor of clinical medicine in his alma mater, and president of the Southwestern Association of Railway Surgeons, for the last ten years engaged in the lumber business, was found dead in bed in Lonoke, Ark, June 30

Gustav A Mathews ⊕ Napoleon, N D (license, North Dakota State Board of Medical Examiners, 1905), aged 46, superintendent of the Logan County Board of Health, who had been operated on repeatedly for disease of the kidney, died in St Alexius Hospital, Bismarck, N D, April 14, from uremia

Robert L Gillespie, Portland, Ore, Willamette University, Salem, Ore, 1886, aged 65, professor of theory and practice of medicine in his alma mater, clinical lecturer on mental and nervous diseases in the Oregon State University, city physician of Portland for one year, died, June 30, from heart disease

Lucy J Utter, Detroit, Michigan College of Medicine, Detroit, 1882, aged 74, one of the first women to practice medicine in Detroit, once vice president and resident physician of the Woman's Hospital, and Children's Home, died in the Pennsylvania Avenue Sanatorium Detroit, July 3

William Lego Nuttall, New Castle Ky, Miami Medical College, Cincinnati, 1871, aged 75, once superintendent of the State Institute for Feeble Minded, Frankfort, Ky, was attacked by his insane brother-in-law June 28, sustaining razor wounds from which he died shortly after

Elsthon E Oglesbee, Cedarville Ohio, Hahnemann Medical College Chicago, 1885, aged 52, a member of the Ohio State Medical Association, died in Mt Carmel Hospital, Columbus, June 30 from peritonitis, a week after a nephrectomy for tuberculosis of the kidney

William L Walker, Centerville Tenn, Eclectic Medical Institute, Cincinnati 1874, aged 74, a Confederate veteran, representative in the legislature from Hickman County in 1890 died in Nashville, June 23, a few days after an operation for the removal of gallstones

James R Menzies, Weihwei, China, Trinity Medical College, Toronto, 1895, aged 56, a medical missionary in China, was shot and instantly killed by Chinese bandits, March 17, while going to the defense of the women in the Mission House, attacked by them

Frank S Johnson, Sioux City, Iowa, State University of Iowa, Iowa City, 1882, aged 64, formerly professor of neurology, histology, bacteriology and pathology in the Sioux City College of Medicine, died at his country home in Bronson, Iowa, July 6

Frank Byron Brown, Boston, Medical School of Maine, Brunswick, 1887, aged 57, a member of the Massachusetts Medical Society, instructor in bacteriology and pathology in Tufts Medical School, Boston, died, July 1, from cerebral hemorrhage

Harve Ellis Harlow, Zearing, Iowa, State University of Iowa, Iowa City, 1914, aged 39, formerly assistant state bacteriologist to the Iowa State Board of Health, a member of the Iowa State Medical Society, died in Rochester, Minn, July 7

Frank Sumner Warren, Biddeford, Me, Medical School of Maine, Brunswick, 1872, aged 69, for several years coroner of York County, a member of the board of aldermen and a member of the legislature, died suddenly, June 28

Sinclair D Gervais Niles, McGhee, Tenn, University of the City of New York, 1861, aged 80, assistant surgeon in the Confederate service during the Civil War, died at the home of his daughter, March 3, from pneumonia

Peter Henry Lane ⊕ Philadelphia, Medico-Chirurgical College of Philadelphia, 1906, aged 41, founder and for sixteen years in charge of the Kenwood Sanatorium, Chestnut Hill, Philadelphia, died, July 7, from pneumonia

John Franklin Campbell ⊕ Chicago, Victoria University, Cobourg, Ont, 1886, L R C P, L R C S, Edinburgh, 1890, aged 56, a specialist on diseases of the eye, ear, nose and throat, died, July 14, from angina pectoris

Eugene Lee Henry ⊕ Lecompte, La, Tulane University, New Orleans, 1897, aged 46, formerly president of the Louisiana State Medical Society and of the board of health of Rapides Parish, died, July 7

Fannie Donovan Conklin, Staten Island, N Y Woman's Medical College of the New York Infirmary for Women and Children, New York, 1876, aged 74, physician to the Lakeview Home, died, July 4

George L Gates ⊕ Winona, Minn, Philadelphia University of Medicine and Surgery, 1869, aged 83, a veteran of the Civil War, died at the home of his brother in St Paul, about July 3

Charles H Saul, Steelton, Pa, University of Pennsylvania, Philadelphia, 1878, aged 67, a member of the Medical Society of the State of Pennsylvania, died, June 30, from heart disease

Kimball Edward Thompson ⊕ Westpoint, Neb, John A Creighton Medical College, Omaha, 1908, aged 36, died at the home of his brother in Westpoint, July 6, from heart disease

Edward Thomas Lawler, Amarillo, Texas, Rush Medical College, 1900, aged 42, a member of the State Medical Association of Texas, died in a sanatorium in California, June 29

James Walter Anderson, Royal Oak, Mich, Michigan College of Medicine and Surgery, Detroit, 1891, aged 58, a member of the Michigan State Medical Society, died, June 21

Frederick Straughn, Jersey City, N J, University of Maryland Baltimore 1870, aged 75, from 1885 to 1890 city physician of Jersey City, died, June 27, from arteriosclerosis

Samuel John Hicks, Ivesdale, Ill, Miami Medical College, Cincinnati, 1890, aged 57, a member of the Illinois State Medical Society, died, July 4 from cerebral hemorrhage

James Maurice Hally, Denver, Bennett College of Eclectic Medicine and Surgery, Chicago, 1885, University of Colorado, Boulder and Denver, 1894, aged 76, died, May 26

Warren Perry ⊕ Fairbury, Neb, Jefferson Medical College 1891, aged 56, local surgeon for the Burlington and St Joseph and Grand Island Railroad, died, July 7

Willard Chancery Earle, Waukon, Iowa, Jefferson Medical College 1867, aged 88, also a druggist, a veteran of the Civil War, died recently at St Petersburg, Fla

Preston Boggs, Franklin W Va, University of Maryland, Baltimore, 1896, aged 52, in 1912 president of the Pendleton County Board of Health, died suddenly, June 19

Joseph Pierre Morneau, Appleton, Wis, Laval University, Quebec, 1899, aged 46, died, June 1, from lobar pneumonia

⊕ Indicates Fellow of the American Medical Association

Edwin H Lodge, Grosse Point Farms, Detroit, New York Homeopathic Medical College, New York 1871, aged 72, once president of Grace Hospital, died, July 3

William B Conway, College Park Ga , College of Physicians and Surgeons, Baltimore, 1869, aged 71, died at the home of his daughter in College Park, July 6

James A Hazle, Freeport, Kan (license Kansas Board of Medical Examiners, 1901), aged 65, a practitioner for forty years, died, April 24, from arteriosclerosis

Harry F McK Shannon, Tygh Valley, Ore , University of Oregon, Portland, 1913, aged 32, a member of the Oregon State Medical Association, died, June 28

Marion Dexter Follin, Johnsville, Ohio, Marion-Sims Medical College St Louis, 1892, aged 53, died in Lakeside Hospital, Toledo, May 23, from nephritis

Earl P Wagner ⊕ South Bend, Ind , College of Physicians and Surgeons, Chicago, 1907, aged 45, for two terms coroner of St Joseph County, died, July 1

Milton S Hopper, Gary, Ind , Medical College of Ohio, Cincinnati, 1881, aged 69, a member of the Indiana State Medical Association, died, May 10

Edward Henry Jewitt, Cleveland, Homeopathic Hospital College, Cleveland, 1878, aged 68, for twenty years a lecturer in his alma mater, died, July 7

John Steinbach, Winona, Minn , Northwestern University Medical School, Chicago 1886, aged 64, a specialist in diseases of the eye, died, April 28

Charles Albert Fritchey ⊕ Harrisburg, Pa , Gross Medical College, Denver 1901, aged 45, died in the Germantown Hospital, Philadelphia, June 24

Edward B Smith, Marion, S C , Medical College of Charleston, S C, 1860, aged 81, died at Centenary, S C, May 25, from senile asthenia

Evans Scott, Holdenville, Okla , Medical Department, University of Iowa, Keokuk, 1864, aged 85, a veteran of the Civil War, died recently

Abram W Mardis, Lebanon, Ohio National Normal University, Lebanon, Ohio 1890, aged 57, died in a hospital in Hamilton Ohio, May 2

Walter Henry Holdridge ⊕ New York, Columbia University, College of Physicians and Surgeons, New York, 1903, aged 39, died, July 3

Jefferson D Taylor, Louisville, Ky Kentucky School of Medicine, Louisville, 1882, aged 58, died, July 3, from pernicious anemia

Walter John Habrowski, Pittsburgh, University of Pittsburgh, 1911, aged 33, also a pharmacist, died, June 15, from tuberculosis

Charles B Kohlhousen, Raton, N M , University of Virginia, Charlottesville, 1867, aged 63, died, April 19, from myocarditis

Clayborn R Carver, Eldorado Texas, University of Arkansas Little Rock, 1898, aged 63, died, June 8, from angina pectoris

James O Wood, Rio Miss , University of Alabama Mobile, 1881, aged 72 died, April 4, from disease of the kidney

Nelson Porter Freeman, Bridgewater N S , University of Vermont, Burlington, 1891, aged 65, died April 15

Paul Octavius Owsley, Asheville N C , Johns Hopkins University, Baltimore, 1899, aged 46, died July 8

Peter John Nathaniel Thelberg, New York City , University of the City of New York, 1887, died, June 7

Eugene H Wood, Bridgeport, Conn , Long Island College Hospital, Brooklyn, 1886, aged 63, died June 16

James Flack Bell, Lonoke Ark (license Arkansas State Medical Board 1903), aged 65, died, May 21

Thomas H Bowles, Dumas, Ark , Missouri Medical College, St Louis, 1898, aged 65, died, May 22

Hugo Schumann, Oakland Calif , American Medical College Eclectic) St Louis 1876, died, June 30

Walter W Scofield ⊕ Dalton, Mass , Albany, N Y , Medical College 1882, aged 66, died, July 7

Benjamin F Mott, Minneapolis, Eclectic Medical Institute Cincinnati 1874, aged 69 died recently

Joseph P Fitzpatrick, St Louis Missouri Medical College St Louis, 1889, aged 52 died July 4

Peter McLaren, Ormstown Que McGill University Montreal, 1872, aged 78, died May 14

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

MORE MISBRANDED DRUG PRODUCTS AND NOSTRUMS

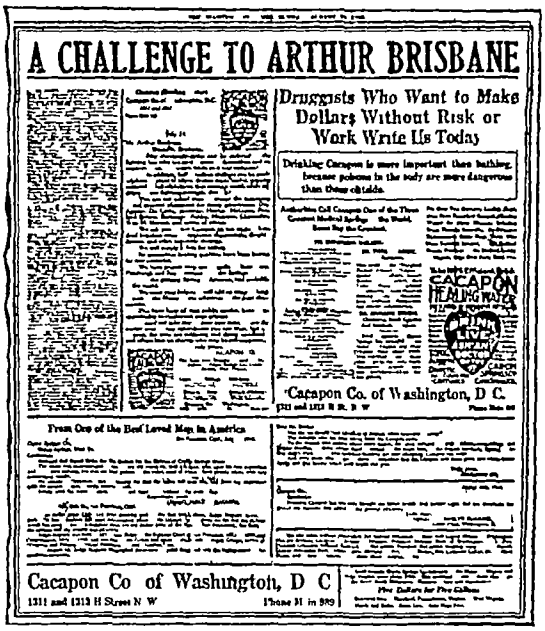
Some Seelye Nostrums—The A B Seelye Medical Co, Abilene Kan shipped in July and September, 1917, "Seelye's Wasa-Tusa," 'Dr Seelye's Compound Extract of Sarsaparilla' "Seelye's Laxa-Tena," Seelye's Cough and La Grippe Remedy' and "Seelye's Fluorilla Compound," which were misbranded The Bureau of Chemistry of the Department of Agriculture analyzed samples of these nostrums 'Wasa-Tusa' was found to contain ammonia, chloroform, camphor, capsicum aromatics, alcohol and water It was falsely and fraudulently represented as a cure for rheumatism lame back, tonsillitis, sore throat, cholera morbus, diphtheria, fever indigestion, deafness and several other conditions when in truth and in fact, it was not' The 'Compound Extract of Sarsaparilla" was found to contain potassium iodid and a small amount of plant extractives aromatics coloring matter, sugar, alcohol and water This was falsely and fraudulently represented as a cure for scrofula, syphilis tumors female weakness and other conditions 'Laxa-Tena' was found to be a dark colored syrup containing essentially emodin-bearing (laxative) plant material sugar alcohol and water It was falsely and fraudulently represented as a cure for jaundice, sour stomach fever and ague and effective to remove the cause of appendicitis and to prevent fever The 'Cough and La Grippe Remedy" was found to be heavy sugar syrup containing plant material with small amounts of alcohol, chloroform and tar It was falsely and fraudulently represented as a cure for influenza whooping cough asthma phthisis and all affections of the throat and lungs and as a preventive, when used in connection with Wasa-Tusa," of lung fever and pneumonia "Fluorilla Compound was to be a syrup containing laxative plant material, a small amount of alkaloids, sugar, alcohol and water It was falsely and fraudulently represented as a cure for anemia 'languid habits in young girls budding into womanhood amenorrhea, leucorrhoea, falling of the womb and other so-called female weaknesses In March 1919, the company pleaded guilty and was fined $50 and costs—[*Notice of Judgment No 6953, issued July 1, 1920*]

Aspirin Tablets—The Verandah Chemical Co Brooklyn shipped in November, 1918 24 packages of a product purporting to be aspirin tablets The article was labeled in part Acetylsalicylic Acid Aspirin' These tablets were declared misbranded in that while they were labeled Aspirin 5 gr' they contained no aspirin but did contain salicylic acid corn starch milk sugar talc calcium carbonate and a small amount of sodium citrate. In June 1919 no claimant having appeared for the property, the court ordered that it should be destroyed by the United States marshal—[*Notice of Judgment No 6990 issued July 1 1920*]

Dr Groves' Anodyne for Infants—A quantity of Dr Groves' Anodyne for Infants was shipped in interstate commerce January 1917 by Smith Kline & French Co Philadelphia The preparation when analyzed by the Bureau of Chemistry was reported to be essentially a sugar syrup flavored with oil of spearmint and containing 1/8 grain of morphin sulphate to each fluidounce The government officials charged that the product was misbranded because it was falsely and fraudulently represented to be effective among other things to remove nervous irritation in children to invigorate children before teething and to relieve [illegible] caused by diarrhea and other affections [illegible] teething when in truth and in fact

further declared to be misbranded because it was falsely and misleadingly represented as "a reliable assistant to a mother in that it was a preparation which could be administered with perfect safety to infants, whereas in truth and in fact the article contained morphin sulphate, a drug which rendered the article unsafe to be administered to infants" It was further misbranded in that, while it contained alcohol and morphin, the carton failed to bear a statement of the quantity and proportion of these drugs, as required by law In May, 1919, the company pleaded guilty and was fined $200—[*Notice of Judgment No 6986, issued July 1, 1920*]

Cacapon Healing Water—In October, 1918, 6 barrels and 40 kegs of Cacapon Healing Water were shipped in interstate commerce by the Capon Springs Co of Capon Springs, W Va The water was declared by the federal authorities to be adulterated in that it consisted in part of a filthy,


A CHALLENGE TO ARTHUR BRISBANE

Druggists Who Want to Make Dollars Without Risk or Work Write Us Today

Drinking Cacapon is more important than bathing, because poisons in the body are more dangerous than those outside.

CACAPON HEALING WATER

Cacapon Co. of Washington, D C.

From One of the Best Loved Men in America

Cacapon Co of Washington, D C

1311 and 1313 H Street N W

A full page advertisement of Cacapon Water that appeared in the Washington (D C) *Times* in August 1918

decomposed and putrid animal and vegetable substance Furthermore, it was declared misbranded because of the curative claims made for the stuff, for example

To be 100 per cent efficient drink Cacapon Healing Water Prescribed by Prominent Physicians for Bright s Disease Kidney Troubles Cacapon Healing Water for Bright s Disease Kidney Troubles Indigestion Diabetes Calculi Rheumatism Women s Diseases Stomach Troubles Dyspepsia Uric Acid Gout Urethral and Uterine Troubles

Has cured for centuries rheumatic gout syphilitic rheumatism and chronic inflammation"

These claims were declared by the federal authorities to be false and fraudulent and "made with a knowledge of their falsity and in reckless and wanton disregard of their truth' so as to mislead and deceive purchasers In April 1919, the court ordered that the product should be destroyed by the United States marshal and that the Cacapon Co, Washington, D C, should pay the cost of the proceedings—[*Notice of Judgment No 6957, issued July 1, 1920*]

Seawright Water—In September, 1918, Seawright Magnesian Lithia Spring Co Staunton, Va shipped nine cases each containing 12 one-half gallon bottles of "Seawright Water' which was declared to be adulterated in violation of the Food and Drugs Act Adulteration was alleged in the libel for the reason that the water consisted in part of a filthy and decomposed vegetable substance No claimant appearing for the property, judgment of condemnation and forfeiture was entered in January, 1919 and the court ordered that the product should be destroyed by the United States marshal—[*Notice of Judgment No 6961, issued July 1, 1920*]

Correspondence

"THE REPORTING OF VENEREAL DISEASES BY PHYSICIANS"

To the Editor —The objection to many of the papers in THE JOURNAL is that they embody solely the swivel chair, or what is equally as objectionable, the laboratory point of view I am prompted at the moment to make this criticism after reading Dr William Edlers article on the reporting of venereal diseases (THE JOURNAL, June 26, 1920, p 1764) His assurance reminds me of the Texas venereal law, which assumes that the man on the street as he runs can diagnose venereal disease His article contains the same threat of revocation of license as the Texas law, notwithstanding that in Texas and in most states the statutes provide that a license can be revoked only on the commission of a crime of the grade of a felony As an employee of the United States Public Health Service, Dr Edler should know that the service will not accept a clinical diagnosis of venereal disease Now, how many physicians can make a laboratory diagnosis, and how many laboratory experts will agree about the diagnosis or obtain a positive diagnosis when the clinical evidence is suspicious, should we turn our cases over to them? This is no rambling assertion but the fruit of experience An important case in the courts in this state recently illustrates the point An expert and disinterested pathologist testified that the case was one of gonorrhea Another witness, equally as expert and disinterested, said that it was not One author says that the gonococcus must be intracellular and another that there must be pus on the slide for a positive diagnosis When we encounter the Wassermann expert we are even more confused regarding our clinical diagnoses Even a government clinic treated a man with herpes for syphilis On a clinical diagnosis, a physician reported a married woman as having gonorrhea The sequel showed that her discharge came from an appendical sinus, and the doctor was up against trouble

Dr Edler attributes his statements about outraged wives and violence to wrong sources or motives The case cited above is the principal reason that causes physicians to be careful in reporting these cases No law that I know of offers to back a physician in court in case he makes a wrong diagnosis or if his diagnosis can be overthrown by a preponderance of witnesses A physician who draws a salary and whose diagnoses are defended by the United States Public Health Service can afford to express positive views, but a great many of us have our living to make by the practice of medicine among our neighbors and must pay our own lawyers if we are forced to go into court.

J H MACKAY, M D, Houston, Texas

[A proof of the preceding was sent to Dr Edler, who replies]

To the Editor —I had hoped in my paper on "The Reporting of Venereal Diseases by Physicians' to have covered the objections offered by the profession as I had heard them That errors in diagnosis and drastic medicolegal consequences were an objection had not up to this minute, come to my attention

Exceptionally, I readily agree, venereal disease diagnostic difficulties are encountered Similarly the same enigma is encountered in all specialties I, too, have seen experts disagree on the diagnosis of scarlet fever smallpox and meningitis, but I always felt that the community, and not the patient, deserved the benefit of the doubt

In its acute and most communicable stage "the man on the street as he *runs* (accent on the last word) can fairly accurately diagnose his malady I feel sure that out of several

hundred thousand cases of venereal diseases reported, the legal complications have been practicably negligible My information is that from the lowest to the highest courts the venereal disease laws, even to the point of seizure of person, have invariably been sustained

I am convinced that if a malpractice suit were instituted against the physician for a mistake in diagnosis, the court would condone his mistake "if he exhibited the skill, care and ability of the average physician in his community" No doubt his state medical society would defend his suit to the limit, and likewise his state board of health, if the suit originated from a report to its office

The Louisiana medical practice act authorizes the revocation of the physician's license for violation of the venereal disease laws I hope that some day the American Medical Association will expel from membership physicians who do not report communicable diseases Shirking obligations of physicians to each other is no more a violation of ethics than criminally contributing to the dissemination of disease—be it venereal or otherwise

WILLIAM EDLER M D, New Orleans

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer s name and address but these will be omitted on request

TUBERCULOSIS JOURNALS — ARREST OF PULMONARY HEMORRHAGES

To the Editor —1 Please let me know the names and addresses of medical journals devoted to tuberculosis in the United States as well as Europe

2 Is there any special apparatus used in American sanatoriums for arresting pulmonary hemorrhages and if there is please let we know the name of the manufacturer

JORGE SAÉNZ M D Costa Rica

ANSWER —1

American Review of Tuberculosis 2419 Greenmount Avenue Baltimore Monthly $3
Journal of the Outdoor Life 381 Fourth Avenue New York Monthly $1 50
Tubercle London Monthly 25 shillings
British Journal of Tuberculosis 151 West 25th Street New York Quarterly $1 25
Archivos Españoles de Tisiología Diputación 211 Barcelona Spain Thirty pesetas
Revista de Higiene y de Tuberculosis Juan de Austria 12 Valencia Spain Twelve ptas
Revista de Tuberculosis Calle Colon 7 Valencia Spain Ten ptas
Revista de Tisiología Murcia Spain Twelve ptas
Tuberculose s Gravenhage Holland
Zeitschrift fur Tuberculose Dorrienstrasse 16 Leipzig Germany Thirty marks
Beitrage zur Klinik der Tuberkulose Würzburg Germany
Internationales Centralblatt fur die gesamte Tuberkulose Forschung Wurzburg Germany
Tubercolosi Milan Italy
Tuberculosis Internationales Centralbureau zur Bekampfung der Tuberkulose Berlin Germany (This is the organ of the International Tuberculosis Society)

Before the war there were published other tuberculosis journals in France and Italy but no copies have been received recently

2 The only apparatus mentioned for such purpose is the device used in producing artificial pneumothorax These devices may be obtained from any of the medical supply houses advertising in THE JOURNAL

TREATMENT OF LEPROSY

To the Editor —Can you give me some information on the results obtained in the leper colony of Hawaii with the new method for increasing the tolerance of patients to large doses of chaulmoogra oil? Please omit my name P P A Colombia

ANSWER —At the recent conference of state and territorial health authorities with the U S Public Health Service Dr G W McCoy, the director of the Hygienic Laboratory stated that the results obtained in the treatment of lepers at the leprosy investigation station in Kalihi, Hawaii, with the ethyl esters from chaulmoogra oil had been encouraging Following a course of treatment extending over about a year, forty-eight lepers treated according to the new method were paroled in October, 1919, and up to now have remained free from the disease It will require, however, some time—probably years—to determine whether a real cure for leprosy has been discovered

The treatment employed was described in the *Journal of Cutaneous Diseases* in articles by H T Hollmann and A L Dean, the authors concluding that in the use of the ethyl ester of the fatty acids of chaulmoogra oil, subcutaneously, we have a method of treatment superior to subcutaneous injection of the chaulmoogra oil mixtures

In the *Indian Medical Gazette* for April, 1920, recently abstracted in THE JOURNAL there appeared a series of articles on the treatment of leprosy one of which was by Rogers on the use of an ethyl ester of the unsaturated fatty acids of cod liver oil in both leprosy and tuberculosis with apparently distinctly favorable results, although it is recognized that much further experience will be necessary before the exact value of the new preparation can be determined

CHLORINATION OF WATER SUPPLIES

To the Editor —Referring to the editorial on Chlorination of Water Supplies which appeared in THE JOURNAL (Spanish Edition Jan 1 1920) I should like to get more details in regard to this method of water disinfection

ALFONSO QUINONEZ M D San Salvador

ANSWER —A list of articles on the purification of drinking water appeared in THE JOURNAL June 7 1913 page 1813 Articles published since that date follow

Whittaker H A Use of Hypochlorite Capsules for Treatment of Small Quantities of Drinking Water *Am J Pub Health* August 1914
Liquid Chlorin and Water Sterilization Current Comment THE JOURNAL July 25 1914 p 327
Chlorin Treatment of Water Supplies editorial THE JOURNAL July 10 1915 p 174
Jordan E O The Purification of Water Supplies THE JOURNAL Feb 12 1916 p 467
Cheap Alum for Water Purification Current Comment THE JOURNAL Jan 27 1917 p 293
Water Purification Queries and Minor Notes THE JOURNAL Feb 24 1917 p 653
Making Water Safe for Drinking Purposes Queries and Minor Note THE JOURNAL Oct 13 1917 p 1291

LABELS ON GLASS

To the Editor —Kindly give a method of preparing ink for marking labels on gross tissue specimens which will not be washed off by immersion in the formaldehyd in which the specimens are preserved Please omit name and address S A L

ANSWER —The glass surface to be labeled should be free of grease Any ink may be employed A coat of thin alcoholic solution of shellac or of balsam should be applied over the ink

OLDEST MEDICAL ORGANIZATION

To the Editor —What is the oldest medical organization in the United States? A S A

ANSWER —The Medical Society of New Jersey was organized in 1766 This is the oldest state medical society of which we have record Before this date there were minor societies in Boston and elsewhere

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Proposed Health Museum.—W J Simpson professor of hygiene and public health in King's College London has suggested the establishment of such a museum to celebrate the means by which we can triumph over preventable disease In such a museum the causes of preventable disease and the means by which they can be prevented would be illustrated practically The museum would be open to all Lectures and demonstrations illustrated by models and the cinematograph should be given and there should be attached a bureau of information —*Medical Press and Circular* 109 105 (Feb 11) 1920

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA Juneau Sept 7 Sec Dr Harry C De Vighne Juneau
HAWAII Honolulu Sept 6 10 Sec Dr R W Benz 1141 Alakea St, Honolulu
ILLINOIS Chicago Sept 20 23 Director Francis W Shepardson, State House Springfield
NEW HAMPSHIRE Concord, Sept 9 10 Sec Dr Charles Duncan Concord

New York January Examination

Mr Herbert J Hamilton, assistant, professional examinations, New York State Board of Medical Examiners, reports the written examination held at New York, Buffalo, Albany and Syracuse Jan 27-30, 1920 The examination covered 8 subjects and included 10 questions An average of 75 per cent was required to pass Of the 169 candidates examined, 90 passed and 79, including 1 osteopath, failed The following colleges were represented

College	PASSED	Year Grad	Number Licensed
Yale University		(1919)	1
Howard University		(1918)	1
Atlanta Medical College		(1914)	1
Rush Medical College	(1895)	(1916)	2
University of Kansas		(1912)	1
College of Physicians and Surgeons Baltimore		(1912)	1
Johns Hopkins University	(1915) (1916) (1918 2)		4
University of Maryland		(1917)	1
Boston University		(1904)	1
Harvard University		(1918)	3
Tufts College Medical School	(1914) (1917)	(1919)	3
Univ of Michigan Homeopathic Med School	(1917)	(1919)	2
University of Nebraska		(1919)	1
Albany Medical College	(1917 2)	(1918)	3
Columbia University	(1914) (1915) (1916) (1917 5), (1918 2), (1919 4)		14
Cornell University	(1918) (1919 3)		4
Fordham University	(1913) (1916) (1917) (1918)	(1919)	5
Long Island College Hosp	(1915) (1917) (1918)	(1919 5)	8
New York Homeopathic Medical College and Flower Hospital	(1913) (1915) (1918 2)	(1919 2) (1920)	7
University and Bellevue Hospital Medical College	(1910) (1915) (1917) (1918)	(1919 6)	10
Eclectic Medical College, Cincinnati		(1916)	1
University of Cincinnati		(1919)	1
Jefferson Medical College	(1899) (1916)	(1917 2)	4
University of Pennsylvania		(1918)	2
Vanderbilt University		(1919)	1
Medical College of Virginia		(1915)	1
Queen's University		(1919)	2
University of Toronto		(1916)	1
McGill University	(1915)	(1918 2)	3
Syrian Protestant College Beirut		(1917)	1
	FAILED		
Yale University	(1916) (1917)	(1918)	3
Georgetown University		(1913)	1
Howard University	(1912) (1913)	(1918 3)	5
Chicago College of Medicine and Surgery		(1914)	1
College of Physicians and Surgeons Chicago		(1902)	1
Northwestern University	(1918)	(1916)	2
University of Illinois		(1917)	1
University of Louisville		(1915)	1
Johns Hopkins University	(1916)	(1918)	2
University of Maryland	(1911)	(1917)	2
Harvard University		(1908)	1
Tufts College Medical School	(1915 2) (1916)	(1917 2)	5
University of Michigan Homeopathic Medical School		(1918)	1
University of Minnesota Medical School		(1917)	1
Washington University Medical School		(1917)	1
John A Creighton Medical College		(1916)	1
Dartmouth Medical School		(1902)	1
Albany Medical College		(1916)	2
Columbia University	(1916)	(1919 5)	6
Cornell University		(1918)	1
Fordham University	(1917),	(1918 3)	4
Long Island College Hospital		(1919)	2
New York Homeopathic Medical College and Flower Hospital	(1914) (1915 2) (1916 4) (1917 3)	(1918 2) (1920)	13
University and Bellevue Hospital Medical College		(1918) (1919)	2
Eclectic Medical College Cincinnati		(1915)	1
University of Oklahoma		(1915)	1
Jefferson Medical College		(1915)	1
University of Pennsylvania	(1903)	(1917 2)	3
Women's Medical College of Pennsylvania		(1916)	1
Vanderbilt University	(1913)	(1914 2), (1918)	4
University of Vermont		(1916)	1
Medical College of Virginia	(1914)	(1915)	2
Queen's University		(1919)	1
University of Havana		(1917)	1
University of Bologna		(1912)	1
University of Bogota		(1908)	1

Mr Hamilton also reports that 14 candidates were licensed by endorsement of their credentials Of these 6 were granted licenses by reciprocity with other states, 7 by endorsement of their licenses on the basis of eminence and authority in the profession, and 1 candidate was granted a reregistration license The following colleges were represented

College	LICENSED BY RECIPROCITY	Year Grad	Reciprocity with
Bennett Medical College		(1912)	Indiana
University of Maryland		(1899)	New Jersey
Columbia University		(1915)	Ohio
Ohio State University College of Medicine		(1916)	Ohio
University of Toronto		(1907)	Indiana
University of Catania		(1912)	Virginia

College	LICENSED BY ENDORSEMENT OF CREDENTIALS	Year Grad	Endorsement with
Cooper Medical College		(1904)	California
Georgetown University		(1900)	Dist Colum
Northwestern University		(1907)	Illinois
Louisville and Hospital Medical College		(1908)	Louisiana
St Louis University School of Medicine		(1904)	Missouri
University of Pennsylvania		(1903)	Penna
University of Valladolid		(1881)	Porto Rico

Illinois March Examination

Mr F C Dodds, superintendent of registration, Illinois Department of Registration and Education, reports the written and practical examination held at Chicago, March 1 4 1920 The examination covered 10 subjects and included 100 questions An average of 75 per cent was required to pass Of the 118 candidates examined 102 passed and 16 failed Seventeen were licensed by reciprocity The following colleges were represented

College	PASSED	Year Grad	Number Licensed
Chicago Hospital College of Medicine	(1918 5)	(1920)	6
Hahnemann Medical College and Hospital Chicago		(1920)	5
Chicago College of Medicine and Surgery		(1917)	1
Loyola University	(1919 2)	*(1920 13)	15
Northwestern University		(1917)	1
Rush Medical College	(1917 3) (1919)	*(1920 56)	60
University of Illinois	(1918) (1919)	(1920 2)	4
Hospital College of Medicine Louisville		(1905)	1
Detroit College of Medicine		(1904)	1
University of Minnesota Medical School		*(1919)	1
National University of Arts and Sciences		(1914)	1
St Louis University School of Medicine		(1919)	1
University of Toronto	(1909)	(1916)	2
Victoria University		(1893)	1
University of Vienna		(1910)	1
University of Padua		(1917)	1
	FAILED		
Denver Homeopathic College		(1904)	1
Chicago College of Medicine and Surgery		(1913)	1
Chicago Hospital College of Med.	(1915 1) (1918 2)	(1919)	4
Loyola University		(1916)	1
Northwestern University Women's Medical School		(1897)	1
Detroit College of Medicine		(1900)	1
Kansas City Medical College		(1897)	1
Meharry Med College	(1913) (1914) (1915 2) (1917) (1919)		6

College	LICENSED BY RECIPROCITY	Year Grad	Reciprocity with
College of Physicians and Surgeons Chicago		(1912)	Washington
Hahnemann Medical College and Hospital Chicago		(1912)	Indiana
Rush Medical College	(1914)	(1907)	Wisconsin
Indiana University		(1910)	Indiana
Keokuk Medical College		(1907)	Iowa
State University of Iowa College of Homeo Med		(1910)	Iowa
State University of Iowa Coll of Medicine	(1909)	(1914)	Iowa
University of Louisville	(1909) Kentucky	(1911)	Indiana
University of Michigan Homeopathic Medical Sch		(1913)	Michigan
University of Minnesota Medical School		(1913)	Minnesota
Eclectic Medical Institute Cincinnati		(1906)	Arkansas
Ohio State University College of Medicine		(1918)	Ohio
University of Pennsylvania	(1876) Kansas	(1904)	Penna

*Degrees for these candidates have been withheld pending completion of their hospital internships

Hawaii May Examination

Dr J R Judd secretary, Hawaii Board of Medical Examiners reports the written examination held at Honolulu, May 10-13 1920 The examination covered 8 subjects and included 64 questions An average of 75 per cent was required to pass Of the 9 candidates examined, 3 passed and 6 failed The following colleges were represented

College	PASSED	Year Grad	Per Cent
Detroit Homeopathic College		(1909)	75 6
Chiba Special Medical School		(1913)	81 2
Osaka Prefecture Higher Medical School		(1907)	78 1
	FAILED		
George Washington University		(1907)	68 7
Bennett College of Eclectic Medicine and Surg		(1898)	58 7
Rush Medical College		(1920)	76 1
Dartmouth Medical School		(1904)	67 5
Nagasaki Special Medical School		(1906)	65 6
Osaka Prefecture Higher Medical School		(1914)	48 1

Miscellany

THE FLIGHT SURGEON

A New Specialist in Medicine

W I SHEEP, M D
Major M C U S Army
WASHINGTON D C

The flight surgeon bears the same relation to aviation as does the specialist in preventive medicine to mankind in general, in that the two are concerned with the prevention of disability and the maintenance of physical efficiency As a knowledge of diseases is essential in order to make intelligent efforts for their prevention, so a knowledge of the special ailments to which the flier is subject is necessary in order that they may be prevented or reduced to a minimum

When the United States entered the World War and there began an immediate and great increase in aviation activities, it early became apparent that, after men had undergone a thorough and special physical examination and were found fit to fly, the most important work of the Medical Division of the Air Service was to keep these selected men under constant supervision to see that they remained fit to fly, and to remove from flying those who became unfit The necessity for such a procedure was made obvious by a report from overseas that the British, French and Italians, by information derived from carefully compiled statistics, had come to the conclusion that 90 per cent of aviation casualties was due to troubles with the fliers, 8 per cent to defective aeroplanes, and 2 per cent to the Huns, further that by proper medical supervision of fliers, the British in two years reduced this 90 per cent. of casualties to 12 per cent

These so-called 'troubles" of the fliers were made the subject of special study by competent experts Medical officers were assigned to duty at flying fields for the purpose of obtaining all possible information concerning ills and accidents of fliers, research laboratories for study and experimentation were established at certain of the fields, frequent reexaminations of fliers were conducted and all of the knowledge acquired thereby was assembled and put into shape for the training of medical officers who were to qualify for the special medical work required by the Air Service Thus there evolved a new specialist in medicine—the flight surgeon

The program for the training of many medical officers as flight surgeons for assignment to overseas squadrons was interrupted by the signing of the armistice The work of the pioneer flight surgeons who were on duty during the war at Air Service stations in the United States was of great value New to duties not clearly defined their status not always understood the importance of their services at first not fully appreciated, they showed keen enthusiasm and marked intelligence in the performance of their tasks and, by practical demonstration of their worth, paved the way for the establishment on a permanent basis of the office of the flight surgeon Further these pioneers rendered reports of their observations and experiences which have been of great assistance in formulating the present system of instruction prescribed for medical officers who desire to qualify as flight surgeons

This instruction is given at the central Medical Research Laboratory, and consists of lectures demonstrations and practical work in normal physiology of respiration and circulation and in the physiology of respiration and circulation of the flier when exposed to high altitudes The ability to differentiate the arrhythmias and all types of valvular heart disease is acquired from clinics and lectures Methods of new and special examinations of the ophthalmologic and otologic apparatus are taught, and each student flight surgeon is required to make a number of complete examinations of the eye and the ear In psychiatry the general field is covered by lectures and clinical work, and special attention is devoted to the making of personality studies In psychology the instruction consists of a study of elementary psychologic methods and the psychology of aviation, a subject which has to do with the mental adaptability of the flier to the work required of him In physics, such matters as oxygen supply apparatus, aviators' goggles, and the rebreathing apparatus for the detection of staleness and the classification of fliers are given study and practical demonstration The whole course of instruction requires two months of intensive work

After its completion, and on being assigned to flying fields for duty, flight surgeons are encouraged to take flying instruction and to qualify as air pilots They can thus by experience in the air comprehend the psychology of flying From the study of the sensations produced during flight they gain a wealth of information of inestimable value in dealing with fliers under their charge They have a true appreciation of the stress which at all times the flier undergoes, the symptoms brought on by flying at high altitudes, and the physical and mental exhaustion incident to prolonged flights They may acquire a personal knowledge of the manifestations of flying 'staleness ' that most insidious and dangerous ailment of fliers, which may exist when the subjects themselves are not aware of it but which the competent observer usually detects without difficulty Further, they have a bond in common with their fellow fliers, and it has been observed that on this account greater confidence is reposed in them by the fliers

Of the forty flight surgeons now on duty at Air Service stations, twenty-nine are on flying status which requires that, either as passengers or pilots they take a minimum of ten flights a month Of these twenty-nine there are seven who are qualified pilots and five who are now taking instruction to qualify as pilots

The duties of the flight surgeon are prescribed officially as follows The duty of the flight surgeon is to act as adviser to the commanding officer of flying schools and squadron groups Although under the post surgeon, he has the freedom of independent initiative in all questions of flying fitness of aviators or cadets Subject to the approval of the commanding officer, he is expected to institute such measures as periods of rest recreation and temporary excuse from duty as may seem to him advisable He takes sick call for aviators and cadets and recommends a disposition of cases excused from duty He will visit such cases as may be in the hospital at the post, and consult with the attending medical officer regarding them From time to time he will make routine reexaminations of aviators and cadets also such special examinations as he may deem advisable being assisted therein by data furnished by the Medical Research Laboratory He will live in as close touch with the aviators and cadets at his station as is consistent with the conditions '

The flight surgeon should be out on the line with the fliers during the hours that flying is actively engaged in The mechanicians look over the engine the control gears, the struts and the wings of the aeroplane before it is taken out for flight how much more important it is that the flier the heart and brains of the whole flying apparatus as one flight surgeon expresses it, should be talked with and critically if but momentarily observed before he is allowed to go up into the air

On recommendation of the flight surgeon the commanding officer of an Air Service station may at any time remove a man from flying duty While the most important part of the flight surgeon's work is in instituting measures for keeping fliers in good physical condition it is worth while to state that of 1 500 fliers in the United States in 1919 of whom [illegible]

is a record, 808 were temporarily disqualified for flying on account of physical disability, and thirty were permanently disqualified

The flight surgeon is required to prepare and send in to the office of the chief surgeon, Air Service, at frequent intervals, standardized reports on fliers. Several of these reports deserve special mention in that the information they furnish gives an idea of the valuable statistics which the central office is enabled to compile. The "Crash" report, sent in from a station whenever there is an injury to a flier or serious damage to an aeroplane, covers the date of beginning of training of flier, hours of dual and solo instruction, hours flown during past month, duration of last flight, number of previous crashes, result of crash, cause of crash, type of plane, etc. The "Care of Flier" report is submitted weekly from each station. It gives the total number of fliers on duty at the station, the number of hours of flying, number of fliers temporarily removed from flying duty by the commanding officer on recommendation of the flight surgeon, cause of disability in each case reported on, statement as to whether physical examination records are on file for all fliers at the station, etc. The "Physical Examination for Flying" report on each flier is sent in semiannually and covers a thorough and complete physical examination, embracing the new standards required for the examinations of the eye, the ear and the nervous system.

The official status of the flight surgeon is prescribed in the following instructions, which have been issued by the director of Air Service to commanding officers of Air Service stations:

"1. Commanding officers of Air Service stations where flying is being carried on will consult with the flight surgeon in all matters pertaining to the mental and physical fitness of the flying personnel of his command. The term 'flying personnel' will include all who make aerial flights, such as instructors, flying officers, and individuals undergoing flying instruction.

"2. Commanding officers will take full advantage of the assistance that can be rendered by the flight surgeon of his field. Such matters as the amount and kind of physical exercise required by individuals engaged in flying, the state of fatigue of the individual flier, the amount of sleep necessary, food problems, reexaminations, and all field conditions affecting the welfare of the flying personnel will be made the subject of conference between the commanding officer and the flight surgeon. Commanding officers should obtain the recommendation of the flight surgeon on applications for leaves or furloughs from those engaged in flying when physical incapacity is made the basis of application.

"3. The flight surgeon will be listed on any form for clearance in vogue at an Air Service station and no flying officer or any one undergoing flying instruction will be transferred from a station without first obtaining a clearance from the flight surgeon. On notification of transfer the flight surgeon will forward to the flight surgeon of the new station the reexamination report and laboratory rating chart of the individual being transferred.

"4. Flight surgeons will be encouraged in every way to take flying instruction. On completion of the prescribed tests, flight surgeons will be rated in the same manner as other flying officers. Applications for flying training should be made through the surgeon to the station commander, and will be accompanied by the necessary report of physical examination.

"5. On recommendation of the surgeon, station commanders will authorize medical officers of the command, who are physically qualified and make application, to take flying instruction. This will enable one of these officers to take the place of the flight surgeon when the latter for any reason is not available for that duty.

"6. Unless an absolute necessity exists therefor, flight surgeons will not be diverted from their regular duties to perform routine post duties when this service can be performed by other medical officers. Flight surgeons should devote all the time possible to the close and constant supervision over flying personnel.

"7. The flight surgeon of an Air Service station will not be detailed as a member of a board of officers convened to examine into the efficiency of a flying officer when it can be avoided. His services will be of more value when called before a board as an expert witness to give testimony relative to physical fitness, etc., of the officer under investigation."

The flight surgeon has come to stay. Instances without number of the practical value of his work could be related. In an analysis of statistics of 1,250 crash reports rendered by flight surgeons, which covers a period from July 1, 1918, to Jan. 1, 1920, and which includes reports on crashes from all stations in the United States at which flight surgeons were on duty, the cause of crash due to physical impairment of fliers when definitely ascertained to have existed, is given as only 2 per cent. Forty-seven per cent. is reported as due to 'poor judgment." It is probable that a relatively small number of these crashes were due to physical impairment, but for lack of more exact information, were not placed in that class.

Undoubtedly the work of the flight surgeon has resulted in the saving of many lives and much valuable property.

Office of Chief Surgeon, Air Service.

OPHTHALMOLOGIC TEACHING

At the annual congress of the Ophthalmological Society of the United Kingdom, the president, Mr. J. B. Story, delivered an important address on this subject. He said that the Council of British Ophthalmologists had already urged the General Medical Council to adopt two reforms—first, to make three months' attendance at an ophthalmic clinic obligatory, and secondly, to have an examination by ophthalmic surgeons as part of the final examination. The General Medical Council accepted the first and rejected the second, a most astonishing thing to those who know well that medical students have no time to waste on subjects that are not necessary and in which examination is not compulsory. There are two reasons why a certain knowledge of ophthalmology is necessary for every person permitted to practice: (1) because the vast majority of physicians cannot escape from having to diagnose and treat diseases of and injuries to the eye when no specialist can be obtained, and (2) because in many serious diseases the evidence afforded by ocular conditions is most important, and often the ocular symptoms are those which induce the sufferer to seek medical advice. For instance, interstitial keratitis may be the first evidence of infantile syphilis, even before the eruption of the teeth described by Jonathan Hutchinson, and acquired syphilis may show itself in the choroid, iris or retina long after the patient has forgotten the primary disease completely. Ocular tuberculosis may be the first visible manifestation of that disease, and the ocular signs are important in tabes, disseminated sclerosis, meningitis and other intracranial lesions, diabetes, nephritis and arteriosclerosis, to mention only a few serious and not uncommon affections. In many of these the ocular signs may be mainly naked-eye appearances or fairly easily observed ophthalmoscopic lesions. The final decision of the General Medical Council is said to be that the hospitals should, or may, refuse certificates to students who do not acquire sufficient knowledge, thus shuffling off the responsibility thrown on it by act of Parliament and placing it not on the licensing bodies over which it has control, but on the medical staffs of hospitals. It has been objected that if an examination in ophthalmology is instituted at the final, it will overload the curriculum, and that other special branches of surgery will claim a similar privilege.

As regards the first objection, the special clinical examination has been the rule in every one of the Irish licensing bodies for some thirty years and has not caused overloading As regards the second, it has already been pointed out how great is the importance of ocular signs and symptoms in serious constitutional diseases, an importance much greater than can be assigned

Book Notices

NEITHER DEAD NOR SLEEPING By May Wright Sewall Urthan Introduction by Booth Tarkington Cloth Price $2 50 Pp 320 Indianapolis The Bobbs Merrill Company 1920

The author of this latest addition to the host of books on spiritualism is a woman who—according to the advertisements—for many years headed a well known girls' classical school, was organizer of the National Council of Women of the United States and of the International Council of Women, and was for nine years chairman of the executive committee of the National Women s Suffrage Association It is interesting to reflect on the fact that during all the time that she was carrying out such work she was apparently living in a maze of unrealities, in a veritable dream state Evidence of her credulity in matters spiritualistic is the following incident

One evening as we sat in the library in ordinary conversation with the expectation that later her gift of automatic writing might be used in my service I told her of the scenes I had witnessed at Oberammergau in August and showed her some photographs of the chief actors Holding out to her a photograph of Judas I asked her to look at it and compare it with another face that we had been analyzing Reaching out her hand she said Where is it?

I replied Why you took it from my hand

No I took nothing I extended my hand to take it but although I saw the photograph in your hand there was nothing for me to take

This seemed incredible to us for it was for both the first experience of instantaneous disintegration"

We were alone in the room of which neither door nor window was open I had held the photograph studying and discussing it before and while I passed it to my friend *who seeing it in my hands found* nothing there when her hand reached mine! We looked everywhere removing every paper from the desk by which we sat going over and over again the basket holding my summer s harvest of photographs It was nowhere to be found When very late the automatic writing began my husband s first sentence was It is useless for you to look for the photograph of Judas ——— took it

In amazement I cried '———! How can that be? What does he want with it?

My husband replied It was a singular thing for ——— to do but he wished to show it to Judas he has done so and Judas is not at all pleased with it

In reply to further expression of incredulity protests and questions my husband aid ——— promises to return the photograph when you least expect it'

In May 1901 while in New York attending a conference of the officers of the National Council of Women I spent an evening with my friend Miss G who produced automatically a dictation from my husband for me On this occasion I had made no reference to the incident narrated above but my husband wrote ——— has been prevented from returning the photograph of Judas by the fact that the latter feels deeply offended by its production and is unwilling that a photograph which he regards as a caricature shall be restored and preserved

Aside from its general interest for the neurologist and psychiatrist, a feature of medical interest is the fact that the author was a sufferer from interstitial nephritis as she states and that she was cured by following the directions—communicated mediumistically—of a physician of the middle ages, now residing in one of the spheres of one of the planes to which mortals pass when leaving this terrestial home These instructions caused her to take materialistic massage treatments from a Swedish masseur vapor baths and exercises They also caused her to undergo periods of starvation and to secure mental relaxation by the study of piano playing under spiritualistic instruction of the great Anton Rubinstein also residing in one of the spheres of one of the planes It may be said that Mrs Sewall s chief communicant from the shores beyond was her husband who died in 1895 and who has been communicating regularly with her ever since The communications have come through trumpet-speaking slate-writing automatic writing ouija boards or the other trumpery methods indulged in by professional mediums In her converse with those who have gone before, Mrs Sewall spoke with numerous celebrities, including, incidentally, Mesmer Many of her conversations are interesting as literary curiosities The book is an amazingly fantastic document It is a pity that such books are advertised to and are being read by many persons of uncritical judgment

THE DIAGNOSIS OF NERVOUS DISEASES By Sir James Purves Stewart K C M G C B M D Senior Physician to the Westminster Hospital Fifth edition Cloth Price $11 Pp 584 with illustrations New York E B Treat & Company 1920

This well known and excellent work well deserves to appear in a new edition As stated in the preface 'from the kindly reception accorded to former editions of this work it is not unreasonable to infer that it has probably been found of some practical use As indicated in the title this is strictly a book on diagnosis Chapters are devoted to various symptoms such as coma convulsions, aphasia, pain reflexes postures and gaits Chapters on war neuroses and organic war lesions of the nervous system have been added Lethargic encephalitis is lucidly considered in its various relations As an example of the author s broadness of view we may mention that in discussing the difficult differentiation between *chorea facial tic and facial spasm he brings out the* valuable diagnostic points and interpretations contributed by French and American observers In fact, this author is singularly free from being insular' in his views and knowledge Any contribution which has proved fruitful in neurology is given a fair mention whether emanating from home or abroad, from friend or foe Freudians may complain that sufficient stress is not laid on the value of psychanalysis in the diagnosis of the neuroses, but the author's conservatism in this regard is shared by the overwhelming majority of neurologists everywhere The publishers work as regards print and illustrations also deserves praise

THE FACULTY OF THE COLLEGE OF PHYSICIANS AND SURGEONS COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK Twenty Four Portraits By Dorri U Jaeger with a Foreword by Samuel W Lambert M D A B A M Boards Price $10 New York Paul B Hoeber 1919

This is a well worked up volume containing a frontispiece showing the entrance to the College of Physicians and Surgeons of Columbia University, a foreword by Dr Samuel Lambert and following this twenty-four large portraits of *the chief members of the present faculty The portraits are* nicely printed rotogravures, with artistic backgrounds Not all are so clear as they might be, and it would seem that clearness of the features has been somewhat sacrificed to artistic presentation Similar publications were issued by the college in 1846 and in 1875 As evidence of the decided historical value is the fact that the 1846 picture contains the photographs of Willard Parker John B Beck Alex Stevens, Joseph M Smith John Torrey Robert Watts and Chandler R Gilman and the group of 1875 contains the pictures of T Gaillard Thomas Thomas M Markoe Alonzo Clark and John C Dalton If every institution of importance could publish a similar work occasionally—say every twenty five years—the *results would form a record of decided personal* interest and of historical value To the medical graduate of any college it means much to have a permanent memento of his teachers in such a satisfactory form Columbia University is to be congratulated on having set such an excellent pace to the movement as is marked by the high quality of the present volume

PERSONAL BEAUTY AND RACIAL BETTERMENT By Knight Dunlap Professor of Experimental Psychology in the Johns Hopkins University Cloth Price $1 Pp 95 St Louis C V Mosby Company 1920

This is a reprint of an address delivered before several different organizations during April 1917 and later published in the *Psychological Review* for May 1918 The address is divided into two parts covering the significance of beauty and the conservation of beauty It indicates the author s belief that the predominant ideal in marriage is the procreation of children and it calls attention to various unsatisfactory conditions of present sex relationship *It does this* before defining the factors governing sex attraction It is a well written thesis

Medicolegal

Effect of Receiving Check "In Full of Account"

(Booth v Dougan (Mo) 217 S W R 326)

The St Louis (Mo) Court of Appeals affirms a judgment in favor of the defendant who was sued by a physician for a balance of $447 claimed to be due on account after the physician had indorsed and collected through the bank a check for $200 reading 'In full of account to date," which the defendant had sent to him The court recognizes the rule to be that when a certain sum is due from one to another, the payment of a lesser sum is no discharge as to the remainder, notwithstanding an agreement to that effect, because the latter agreement is without consideration But such rule, the court says, does not apply when the amount due is disputed or unliquidated When a claim is unliquidated, any sum no matter how small, given and received in satisfaction of the demand, will legally satisfy it, however large the claim may be. A debt or demand is liquidated when agreed on by the parties or fixed as to the amount by the operation of law The account in this case was made up of charges for visits made by the plaintiff, as a physician in attendance on the defendant and his family, from Nov 4, 1911, to May 30, 1915 and totaled $1,347, on which payments were credited, of $200 in 1912, $200 in 1913 $300 in 1914, and $200 in 1915 It was admitted at the trial that it was not necessary for the plaintiff to prove each of his items in detail, but that it would be conceded that he would testify to the correctness of each item. The defendant contended, however that the last payment was made by him and accepted by the plaintiff as in full of all amounts due the plaintiff In no sense could this be said to have been a liquidated account While it was true that the defendant did not dispute that the services had been rendered and that the charges made for them were reasonable, he nowhere admitted that he owed them On the contrary, when his attention was called to the account rendered just before he sent his check for the last payment, he called the plaintiff's attention to the fact that they had before settled on a compromise basis and proposed to do that here, and on the plaintiff's stating that his account was about $400, the defendant stated that he would pay $200 if the plaintiff would accept that in full It was true that the plaintiff denied this conversation over the telephone, but that was for the jury, the defendant having distinctly testified to it It was under these circumstances that the defendant made out his check for $200, writing on it that it was in full transmitted it by letter, calling attention to that sum and the plaintiff accepted the check and cashed it Under these circumstances the plaintiff was bound by his act and could not claim anything over and above the $200 His reception and retention of the $200 in full payment of his account, that not being a liquidated account, or an account stated, was conclusive on him

Liability of Physicians for Bad Dental Work

(Nisbet v Vandiver (Ga) 101 S E R 761 Eichholz v Poe et al (Mo) 217 S W R 282)

The Court of Appeals of Georgia, Division No 1, in the case of *Nisbet v Vandiver*, affirms a judgment in favor of plaintiff Vandiver, a boy about 8 years of age, for damages in an amount not stated by the court, for alleged permanent injury done to him by defendant Nisbet a licensed practicing physician and surgeon, in what he did, or failed to do, in extracting a lower tooth for the plaintiff It was alleged that the defendant failed to administer properly the cocain used, and failed to exercise a reasonable degree of care, skill and diligence in that he used an unclean and infected needle to administer the cocain, injected unsterile cocain, was not careful as to selecting and using clean forceps or instruments, and did not properly diagnose and treat the case afterward, as a result of which gangrene developed, which required a removal of part of the jawbone and a disfiguring opening of the chin The defendant denied the charges of negligence, and averred that, if any gangrene developed, it occurred after his connection with the case had terminated, and was in no manner caused by him The court, however, thinks that there was evidence to support the verdict for the plaintiff

In the case of *Eichholz v Poe et al*, in which two physicians and a dentist were the defendants, the Supreme Court of Missouri, Division No 2, reverses an order of involuntary nonsuit and remands the case for a new trial The court says that the plaintiff was a blacksmith, who worked at his trade until he went to the hospital where the defendant physicians operated on him and removed a kidney On the day after the operation he had a toothache, of which he notified the physicians, and one of the physicians called his dentist, the other defendant, who examined the tooth, applied some lotion to stop the pain, went away, but returned that evening, extracted the tooth and broke the jaw in so doing The plaintiff did not call any supporting witness in his behalf, either lay or expert, although he might have called the nurse who attended him at the hospital, or he might have called the physician who treated him after he discharged the defendants At the close of his case the defendants demurred to the testimony, and their demurrers being sustained the plaintiff suffered an involuntary nonsuit The defendants contended that the demurrers were properly sustained because there was no proof in the record of any negligence on the part of the defendants, and because there was likewise no proof of a causal connection between the act done and the injury suffered The plaintiff charged in his petition that, while he was in a painful and weakened condition resulting from the operation for the removal of the kidney, the defendants negligently carelessly and unskilfully extracted one of his teeth and in so doing fractured his jaw, and thereafter failed properly to care for and treat the case in consequence of which blood poisoning ensued Where, as here, negligence is charged and that it resulted in the injury complained of, both must be affirmatively proved except as to causal connection in cases in which it is supplied by statute The causal connection in this case not being supplied by statute, it must be proved the same as negligence But it is not necessary that negligence and causal connection between it and the injury be established by direct and positive testimony It may be shown by circumstantial evidence inferences legitimately drawn from physical facts which are disclosed by the record Thus either negligence or causal connection may be inferred by the jury The proximate cause of the injury was established sufficiently by the testimony of the plaintiff, who swore that his jaw was fractured in the act of extracting the tooth and the extraction of the tooth being under the management and control of the defendants the court thinks was sufficiently out of the ordinary course of that which usually happens when ordinary care and skill are employed, to warrant the jury in finding, in the absence of explanation by the defendants, that the tooth was negligently extracted

Alcoholic Insanity as a Defense for Murder

(Collier v State (Okla) 186 Pac R 963)

The Criminal Court of Appeals of Oklahoma, in affirming a conviction of murder, says that the principle is everywhere recognized that voluntary intoxication is no justification or excuse for crime and is no excuse for homicide, though carried to the extent of producing incapacity to control the mind and will According to the syllabus by the court, in a prosecution for murder, alcoholic insanity, or mental incapacity produced by voluntary intoxication existing only temporarily at the time of the homicide is no justification or excuse therefor To constitute insanity caused by intoxication a defense in a trial for murder it must be insanity caused by chronic alcoholism, and not a mere temporary mental condition Insanity, though superinduced by excessive and long-continued indulgence in alcoholic liquors and known as "delirium tremens," or "mania a potu" renders a person so afflicted irresponsible for his acts if it be of such a character as to deprive him of the mental capacity to distinguish between right and wrong as applied to the particular act whether he be under the influence of liquor at the time of the commission of the act or not, but to do so, his afflic-

tion must be settled or fixed insanity, not a mere fit of drunkenness A person not previously laboring under such a disease or affliction, who voluntarily becomes intoxicated to such an extent and for such a period of time as to cause unconsciousness of his acts, is not irresponsible under the law for the acts done by him while in such mental condition

Under the penal code of Oklahoma homicide is murder "when perpetrated without authority of law and with a premeditated design to effect the death of the person killed, or of any other human being," and evidence of intoxication is admissible to show an absence of the premeditated design to kill, for the purpose of determining whether the offense was murder or manslaughter, and a state of intoxication which will reduce homicide from murder to manslaughter in the first degree must be of such character and extent as to render the defendant incapable of entertaining or forming a design to effect death And this question is for the jury to determine. Intoxication, either voluntary or involuntary, is to be considered by the jury in a prosecution for murder in which a premeditated design to effect death is essential, with reference to its effect on the ability of the defendant at the time to form and entertain such a design not because, per se, or in and of itself, it either excuses or mitigates the crime but because, in connection with other facts an absence of malice or premeditation may appear And the court says that where intoxication is resorted to for the purpose of blunting moral responsibility, it only increases the culpability of the defendant

Society Proceedings

COMING MEETINGS

Amer Assn of Electro Therapy & Radiology Atlantic City Sept 14 17
American Public Health Association San Francisco Sept 13 17
American Roentgen Ray Society Minneapolis Sept 14 17
Colorado State Medical Society Glenwood Springs Sept 7 9
Missouri Valley Medical Society of the Omaha, Neb Sept 6 7
Utah State Medical Association Ogden Sept 7 8
Washington State Medical Association Tacoma Sept 16 17
Wisconsin State Medical Society of La Crosse Sept 8 10
Wyoming State Medical Society, Cheyenne Aug 9 10

OHIO STATE MEDICAL ASSOCIATION

Seventy Fourth Annual Meeting held at Toledo Ohio June 1 5 1920

(Continued from page 198)

Problem of Forceps Prehension in Obstetrics

DR WILLIAM GILLESPIE Cincinnati Most writers on and teachers of obstetrics tacitly assume that the tyro can perform a forceps extraction properly with axis traction instruments, provided certain simple rules of procedure are followed The truth, however, is that most writers have circulated gross misconceptions about the use of forceps in their textbooks, and many common errors about axis traction have crept into the practice of the average obstetrician The pubic joint may be torn asunder by the force of misguided axis traction, so it is apparent that the proper use of this tremendous force must be more judiciously taught and practiced While the posterior surface of the pubes furnishes the best guide as to the axis of the pelvis in applying the blades of the forceps, there are special advantages in mastering their cephalic application as well Such competence will enable the obstetrician to avoid cerebral lesions of the new-born, the result of misapplied blades and pressure. It is quite possible by an intensive study of the mechanism of labor as well as the principles of axis traction to use forceps for the high operation even with the head floating above the brim of the pelvis, also for canting the head past the promontory and delivering through flat pelves, even in face presentations

Old and New Technic in Operating for Cataract

DR DERRICK T VAIL Cincinnati The old or combined capsulotomy method of operation is faulty because it is applicable only to ripe or nearly ripe cataracts I would encourage those who undertake the operation for cataract to adopt Smith s method throughout in every case in which the lens shows a disposition to be delivered without strain, and as a method of last resort in case of imminent disaster The best time to operate for cataract is before blindness and senility have set in I operate when the patient can no longer read newspaper print with his best glasses in ordinary light

Choice of a One-Stage or Two-Stage Operation for Cataract

DR ROBERT SATTLER Cincinnati For a large majority of cases of relatively far advanced partial or complete senile cataract favorable and ready for operation with functional examination urinalysis and commonly accepted surgical risks in their favor the complete operation is justly preferred and has become an almost universal practice on account of the advantages of only one hospital experience For the exceptional cases a two stage operation is substituted.

Polycystic Kidney

DR F C HERRICK Cleveland Undoubtedly some cases of polycystic kidney give such a prominent family history of an hereditary tendency as almost to justify the term "congenital" as applied to the condition occurring in adults The surgical treatment of this condition has been chiefly limited to its complications of stone and infection Nephrectomy is absolutely contraindicated Experiments have shown that the cystic pressure limits the renal circulation and that evacuation of the cysts as a therapeutic measure during acute retention would seem to be justified

Causes and Treatment of the Conditions Underlying High Blood Pressure

DR LEWELLYS F BARKER Baltimore High blood pressure appears to depend chiefly on a narrowing of the lumina of the arterioles in the precapillary areas It is at first functional and caused by hypertonus of the arterial musculature, though later it assumes a partly organic character the result of arteriosclerosis The different types of chronic arterial hypertension probably represent different stages in the development of the same fundamental process which may advance with variable rapidity and with variable associated involvements of cardiovascular renal cerebral and other structures in different cases When recognized early the process may often be arrested or so delayed in its progress that patients may live comfortably for many years before troublesome symptoms or dangerous complications occur In the later stages of the process much can be done to ameliorate symptoms and to ward off dangers, though in the actual end stages both patients and physicians do better bravely to face reality, accepting the inevitable rather than through wishful thinking increase suffering by resorting to meddlesome therapy that attempts the impossible To prevent the development of the pathologic process underlying high blood pressure, one should first get himself well born without constitutional inferiorities and then should avoid intoxications and infections and satisfy his physical, economic social, educational esthetic and ethical desires in a well balanced way, so ordering his activities that he will secure the highest self realization possible in the service of the society in which he lives

Peripheral Nerve Injuries

DR LEWIS J POLLOCK Chicago The striking feature of the clinical picture of early nerve lesions is the large percentage of marked and rapid improvement There were probably 10 000 peripheral nerve lesions sustained in battle by the American Expeditionary Forces To my knowledge not more than 3 000 cases were classified as peripheral nerve lesions in the hospitals of the United States In other words, two thirds of the patients had so far recovered on reaching home hospitals that their nerve lesions were considered as of minor importance From the cases coming under my personal observation I would conclude that no more than one seventh of all cases should come to operation One must be able to evaluate the paralysis of a mixed nerve injury and to avoid the mistake of misinterpreting accessory muscle movement and anastomotic nerve supply factors that account for the miraculously rapid recoveries following resection and suture of peripheral nerves as reported by surgeons

(To be

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal Medical Sciences, Philadelphia

June 1920 **159**, No 6

Causes and Definition of Cancer L Loeb St Louis —p 781
Treatment of Thyroid and Other Endocrine Disturbances J A Lichty Pittsburgh —p 800
*Human Arteriosclerosis Its Etiology and Symptomatology G W Norris, Philadelphia —p 815
Arteriosclerosis in Wild Animals H Fox, Philadelphia —p 821
*Two Cases of Fibrinous Bronchitis, Review of Literature I C Walker, Boston —p 825
*Curves of Sugar and Urea After Standard Protein Meals A T B Jacobson and H Edwards New York —p 833
Treatment of Surgical Shock in Zone of Advance W R Ohler Boston —p 843
*Hyperglycemia in Its Relation to Immunity G L Rohdenburg and H T Pohlman, New York —p 853
Tests of Physical Fitness P D White Boston —p 866
Life Cycles of Bacteria and Their Possible Relation to Pathology R R Mellon Rochester —p 874
Nephritic Diet Sheet Regulating Protein Intake E T Walsh and J P O Hare Boston p 883
*Antipneumococcus Serum (Kyes) in Treatment of Pneumonia A W Gray, Milwaukee —p 885
Chronic Pericardial Adhesions J C Lyter St Louis —p 891
Effect of Therapeutic Doses of Mercury on Kidneys and Duration of Its Excretion I G Beinhauer Ann Arbor Mich —p 897

Arteriosclerosis in Man—It seems to Norris that clinical arteriosclerosis may simply be an involutional process, a part and parcel of aging, or it may be mechanical or toxic in origin Just how this involutional process is brought about is not known, but it seems more than likely that it will ultimately be shown to be the result of chemical changes associated with the bodily metabolism which exert their effects on the individual visceral, vascular and somatic cells, either directly or through the mediation of the ductless glands

Arteriosclerosis in Wild Animals—The study reported by Fox is a part of a general scheme of the Laboratory of Comparative Pathology at the Philadelphia Zoological Garden to place on record a review of the lesions found among the animals at the necropsy table Mammals subjected to necropsy 1 806 angeitis, 33 or 1 8 per cent , birds subjected to necropsy, 3,571 , angeitis 53, or 1 4 per cent

Two Cases of Fibrinous Bronchitis—That cases of fibrinous bronchitis would probably not be as rare as the literature would indicate if the sputum of patients were more carefully examined is the belief held by Walker The diagnosis of fibrinous bronchitis is made only by the finding of long branching bronchial casts in the sputum of persons who do not have tuberculosis, diphtheria pneumonia or some other primary bronchial disease Fibrinous bronchitis is an idiopathic disease, the cause of which is unknown Although it may be due to a neurosis, it seems more closely allied to bronchitis, bronchiectasis and asthmatic bronchitis

Curves of Sugar and Urea After Standard Protein Meals—One important finding made by Jacobsen and Edwards is that after a standard meal of 50 gm protein there is generally a rising curve of urea in the blood, which as a rule, is higher in patients with severe diabetes or nephritis than in normal persons The blood-urea level is not a reliable index of nitrogen retention In some instances, for example in diabetics, it may possibly bear some relation to the rate of protein catabolism On the whole, it seems to be governed by so many factors of the previous diet fluid retention and unknown metabolic conditions that by itself it forms an uncertain basis for conclusions The plasma sugar of normal persons is not appreciably altered by this quantity of protein The substances in nephritic blood, which react like sugar to the Benedict test, are increased after a protein meal A typical curve of hyperglycemia follows the ingestion of protein in suitably severe cases of diabetes This is likely to be missed if active symptoms of glycosuria or hyperglycemia are present, as the effect of 50 gm protein could scarcely be expected to be noticeable amid such a surplus of sugar Rarely also the rise may be slight in extreme exhaustion Under the conditions of strict diet treatment this reaction to a standard protein meal may be used as a measure of the severity of diabetes and a guide both to the protein allowance and the total ration, and it has lately been used for these purposes in this clinic

Hyperglycemia in Relation to Immunity—The experiments recorded by Rhodenburg and Pohlman show a phenomenon associated with the process of immunity which has hitherto escaped observation An analysis of the hyperglycem a following repeated injections of the same substance indicates that the hyperglycemia is one which gradually increases in intensity up to a certain level of sugar concentration in the blood, that it keeps this level of intensity for a short period and then returns to a normal figure even though the immune bodies are still present in the blood The experiments further suggest that the hyperglycemia which follows the injection of substances generally supposed not to be capable of inducing antibody formation (i e, fats, polypeptids) may serve as a method for testing the reactions of the body when neither precipitins, agglutinins nor lysins are demonstrable From a practical standpoint the absence of a hyperglycemia after the injection of a given substance known to induce hyperglycemia might be taken to indicate the point of maximum antibody production in the individual or animal in question

Antipneumococcus Serum in Pneumonia—The comparison submitted by Gray is a mortality of 16 7 per cent in 234 serum treated cases of pneumococcus pneumonia, with a mortality of 53 6 per cent in 1,684 similar cases treated in other respects by the same methods, except that they received no serum In other words, the death rate in the serum treated cases was somewhat less than one third that in the cases compared

American Journal of Roentgenology, New York

May 1920 **7**, No 5

Case of Thyroid Metabolism C W Schwartz Boston —p 229
Four Cases of Malignant Disease Successfully Treated by Roentgen Ray A F Tyler Omaha —p 231
Pathologic Findings in One Thousand Roentgen Ray Examinations of Digestive Tract W Warner Watkins Phoenix Ariz —p 234
Case of Diaphragmatic Hernia without Severe Symptoms H J Howk and J A Herring, Mt McGregor New York —p 247
Hernia of Diaphragm with Portion of Stomach in Thoracic Cavity W W Belden New York —p 250
Manufacture of Coolidge Roentgen Ray Tube R C Robinson and C N Moore, Schenectady N Y —p 254
Study of Gas Containing Roentgen Ray Tubes and Description of New Tube A Mutscheller New York —p 261

June 1920, **7**, No 6

Diagnosis and Localization of Non Opaque Foreign Bodies in Bronchi C Jackson W H Spencer and W F Manges Philadelphia —p 277
*Secondary Hypertrophic Osteo Arthropathy with Metastatic Sarcoma of Lung L Bryan San Francisco —p 286
True Congenital Hernia of Stomach in Right Diaphragm D Y Keith Louisville —p 289
Bucky Diaphragm Principle Applied to Roentgenography H E Potter Chicago —p 292
*Diagnosis by Roentgen Rays of Cirrhosis of Liver A H Pirie, Montreal —p 296
Malignant Abdominal Tumor Clinically Cured by Roentgen Ray L S Goin Battle Creek Mich —p 297
Plan of a Building for a Model Roentgen Ray Laboratory J D Morgan Montreal —p 298
Alveolar Infections of Dental Origin as Seen by Roentgenologist H W Dachtler Toledo —p 302
Cancer Ameliorations and Cancer Immunity A F Holding, Madison Wis —p 306

Secondary Hypertrophic Osteo-Arthropathy—To the five cases of this condition now on record, Bryan adds one occurring in a man aged 29 Fifteen years ago the patient was run over by a wagon and had the middle third of the right arm badly cut and bruised The wound healed readily, leaving considerable scar tissue Five years after the accident, a rapidly growing mass appeared in the scar tissue It was excised, but recurred within a year and was again removed A year later excision was again attempted and still later a fourth excision was done When first seen by Bryan, there was no apparent bony involvement, no evidence of glandular involvement and no clinical roentgen-ray evidence of pulmonary involvement A thoracoscapular amputation was done from which the patient made an uneventful recovery Examination of the specimen showed a spindle and small cell sarcoma Sixteen months following the operation the patient

urned with a large mass at the site of the amputation, with nical evidence of pulmonary involvement and complaining pain in the knees Roentgen-ray examination showed fluid the chest with multiple rounded shadows of increased nsity throughout both lung fields, typical of metastatic lignancy The hand and the feet showed marked clubbing the phalanges with irregular burrlike expansion of the tal ends of the phalanges The metatarsals metacarpals iae fibulae, femurs, the remaining radius, ulna and merus, all showed a marked laminated ossifying periostitis ich was sharply differentiated from the cortex of the bone, a rule this periosteal reaction was confined to the diaphs and was most marked near the distal ends of the bones ere was no involvement of the skull, vertebrae, scapula or vic bones There was no apparent erosion of the joints attempts of fusion of the reaction zone with the shaft as n in some of the older cases

Roentgen-Ray Diagnosis of Liver Cirrhosis—The irregular tline of the hobnail liver was shown by Pirie, with the ntgen rays by injecting into the peritoneal cavity a liter oxygen and making roentgenogram in the upright position

Archives of Neurology and Psychiatry, Chicago

June 1920 3 No 6

ndocrinologic Aspects of Some Neurologic Conditions W Timme New York—p 601
onoplegia Spinalis Spastica Report of Cases W G Spiller Philadelphia—p 609
istopathology of Brain Abscess with Remarks on Intraspinal Therapy G B Hassin Chicago—p 616
resence of Arsenic in Spinal Fluid G W Hall R J Callender and E C Holmblad Chicago—p 631
even Cases of Cervical Sympathetic Nerve Injury Causing Oculo pupillary Syndrome S Cobb Boston, and H W Scarlett Philadelphia—p 636
editations on Morale D Gregg Wellesley Mass—p 654

Endocrine Deficiency in Neurologic Conditions—Supranal inefficiency in neurasthenia pituitary disfunction in graine and in epilepsy are the conditions to which Timme rects attention

Value of Intraspinal Therapy—The practical conclusion awn by Hassin is that intraspinal therapy of cases in which pecially the parenchyma of the brain is deeply involved, as general paresis, has not physiologic support In those ses in which the trouble is in the subarachnoid space itself, in cerebrospinal meningitis the injection is wholly justid for given in suitable doses it may produce results But used in intraspinal therapy, in very small doses (fractions a grain of arsphenamin), therapeutic results can hardly be pected Hassin believes that the favorable reports of the vift-Ellis method of treatment by some reliable observers n be explained not by the action of the intraspinal injecons, but by that of the intravenous ones

Arsenic in Spinal Fluid—According to Hall and others sphenamin given intravenously in 0.6 gm doses may be tected in the spinal fluid in from 25 to 35 per cent of e cases Irritation of the meninges by the injection of itoserum into the spinal canal does not increase this pertntage

Cervical Sympathetic Nerve Injury Causing Eye Symptoms Cobb and Scarlet claim that lesions affecting the seventh id eighth cervical and first thoracic roots through which mpathetic fibers run, cause the most severe and typical ulopupillary syndromes

Arkansas Medical Society Journal, Little Rock

June 1920 17, No 1

iagnosis of Chronic Heart Disease H McCulloch St Louis—p 1

Boston Medical and Surgical Journal

July 8 1920 183 No 2

rostatectomy H G Bugbee New York—p 41 To be continued

Colorado Medicine, Denver

June 1920 17 No 6

iscrepancies between Clinical Symptoms and Laboratory Findings in Syphilitic Disease of Nervous System G A Moleen Denver—p 147
Treatment of Nasal Accessory Sinus Disease F R Spencer Boulder—p 156
Differential Diagnosis of Ureteral Obstruction from Lesions of Other Abdominal Organs O S Fowler Denver—p 159
*Subcutaneous Use of Lobelia. A J Nossaman Pagosa Springs—p 164

Value of Laboratory Findings—The five cases cited by Moleen are said to emphasize that all laboratory procedures must be valued only as contributory evidence as modifying but not contradictory to clinical phenomena—that the preponderating evidence belongs to clinical manifestations of disease In the absence of clinical evidence of a nervous lesion the presence of a positive Wassermann reaction is not to be ignored inasmuch as lipoids giving such a reaction may exist in the body fluids probably derived from sequestered or isolated foci without or prior to the occurrence of disintegrative lesions of the nerve structures

Lobelia a Valuable Eliminant.—Nossaman recommends the use of lobelia as an eliminant He administers it hypodermically from 10 minims to 1 dram repeated as necessary every two to four hours in acute cases, and once or twice a day in chronic cases He believes that lobelia has not been used as much as it should be

Indiana State Medical Association Journal, Fort Wayne

June 15 1920 13 No 6

Sir William Osler E M Hoover Elkhardt Ind—p 191
Mechanical Aids in Diagnosis of Lesions of Upper Urinary Tract J S Eisenstaedt Chicago—p 197
Darning Needle in Lung J N Study Cambridge City Ind—p 200
Fracture of Calcaneus E B Mumford Indianapolis—p 200

Iowa State Medical Society Journal, Des Moines

June 1920 10 No 6

Lung Abscess Exophthalmic Goiter and Cholecystitis Following Tonsilectomy W H Rendleman Davenport—p 168
Dangers Associated with Blood Transfusions J deJ Pemberton Rochester Minn—p 170
Cases of Carcinoma of Rectum W W McCarthy Des Moines—p 173
Chronic Catarrhal Otitis Media F F Agnew, Independence—p 175
Skin Grafting J F Pember Janesville Wis—p 181

Journal of Bacteriology, Baltimore

May 1920 5 No 3

Families and Genera of Bacteria Report of Committee of Society of American Bacteriologists on Characterization and Classification of Bacterial Types C F A Winslow and others—p 191
Production of Hydrogen Sulphid by Bacteria J T Myers Chicago—p 231
Correlation Study of Colon Aerogenes Group of Bacteria with Special Reference to Organisms Occurring in Soil C C Chen and L F Rettger New Haven Conn—p 253
Flora of Stomach G E Burget Chicago—p 290
Relative Effect of Phosphate Acetate and of Phosphate Phthalate Buffer Mixtures on Growth of Endothia Parasitica on Malt Extract and Corn Meal Media M R Meacham J H Hopfield and S F Acree—p 305
Method of Determining Relative Toxicity of Sodium Potassium Lithium and Other Ions Toward Endothia Parasitica Data on Sodium Chlorid M R Meacham J H Hopfield and S F Acree p 309

Journal of Experimental Medicine, Baltimore

June 1 1920 31 No 6

Studies on Experimental Pneumonia R L Cecil and F G Blake Washington D C—p 657
*V Active Immunity Against Experimental Pneumococcus Pneumonia in Monkeys Following Vaccination with Living Cultures of Pneumococcus—p 657
*VI Active Immunity Following Experimental Pneumococcus Pneumonia in Monkeys—p 685
Experimental Syphilis in Rabbit W H Brown and L Pearce New York—p 709
I Primary Infection in Scrotum—p 709
II Scrotal Lesions—p 729
III Local Dissemination Local Recurrence and Involvement of Regional Lymphatics—p 749
Heterotransplantation of Thyroid Gland L Loeb St Louis—p 765

Active Immunity Against Experimental Pneumonia—The subcutaneous injection of small doses of living virulent pneumococcus Type I was found by Cecil and Blake to stimulate in monkeys a degree of active immunity sufficient to protect them against experimental pneumococcus pneumonia of homologous type If administered [illegible] only large

dose, it likewise renders the monkey immune to a subsequent pneumonia of homologous type Vaccination of living virulent pneumococci may or may not be followed by a severe constitutional reaction, depending on the natural resistance of the individual The severe reactions are caused by the development of a pneumococcus septicemia, which is either temporary, or leads to a fatal termination The mild reactions are not accompanied by septicemia, and there are no symptoms other than a slight elevation of temperature and moderate leukocytosis Vaccination with living virulent pneumococci does not induce severe reactions and is not accompanied by pneumococcus septicemia

Active Immunity Established by Experimental Pneumonia—According to Cecil and Blake experimental pneumococcus Type I pneumonia in monkeys confers on them an immunity which protects them against subsequent infection with the homologous type of pneumococcus The duration of this immunity has not been determined A certain amount of cross immunity against the other fixed types of pneumococcus pneumonia may or may not be present following experimental pneumococcus Type I pneumonia The degree of cross immunity is difficult to measure and probably varies widely with the individual monkey Experimental pneumococcus Type IV pneumonia in monkeys confers slight if any protection against subsequent infection with the same or with an homologous strain of pneumococcus Type IV There is not evidence in monkeys of cross immunity against pneumococcus Type IV pneumonia following pneumococcus Type I pneumonia, and conversely, pneumococcus Type IV pneumonia confers no cross immunity against pneumococcus Type I pneumonia

Heterotransplantation of Thyroid—The heterotoxins Loeb says injure the transplanted cells directly and make them thereby susceptible to additional injurious influences, such as lack of good vascularization fibrous character of the stroma causing compression of acini, and direct invasion and destruction of a limited number of acini by fibroblasts and lymphocytes These factors lead to a constant dying of transplanted parenchyma which is not compensated for by any appreciable new formation of tissue The primary factor in the destruction of the heterotransplant is the injurious effect of the heterotoxins They change the metabolism of the transplanted cells which now exert an effect on the blood vessels, connective tissue cells, and lymphocytes which differs in certain respects from that exerted by normal as well as auto and homoiotransplanted cells These secondary reactions contribute to the destruction of the heterotransplants

Journal of Orthopedic Surgery, Lincoln, Neb

June 1920 **2** No 6

Splint for Treatment of Stiff Fingers F T A Ulrich New Zealand p 321
*A tragalo Scaphoid Dislocations of Foot A T O Donoghue Iowa City Ia—p 327
Treatment of Fractures of Upper End of Humerus by Modified Crane Splint F E Peckham Providence R I—p 339
Suggestions from Brace Shop R V Tunsten Iowa City Ia—p 345

Astragaloscaphoid Dislocations—O'Donoghue states that scapho-astragaloid dislocations usually take place when the foot is supinated and plantar-flexed A palpable caput tali and a prominent scaphoid with a depression proximal to it is the most important physical sign of dislocation in the scapho-astragaloid joint Open operation is usually indicated in order to hold a satisfactory reduction Resection of the head of the astragalus is often necessary in cases of more than two weeks standing

Kansas Medical Society Journal, Topeka

June 1920 **20**, No 6

Past Present and Future of Medicine E E Liggett Oswego—p 151
Geriatrics J A Rader Caney—p 154

Laryngoscope, St Louis

May 1920 **30**, No 5

Present Status of Plastic Surgery about Ear Face and Neck J C Beck Chicago—p 263
Ethmoid Operations for Pansinusitis W P Reaves Greensboro—p 289
Radium Applicator for Larynx O T Freer Chicago—p 298
*Case of Traumatic Salivary Fistula S Oppenheimer New York—p 304
Woody Phlegmon, Report of Cases H L Pollock Chicago—p 306
Falling Reaction of Acrobatic Aviators R J Hunter, Philadelphia—p 312
Foreign Body in Right Inferior Bronchus, Removal E G Gill, Roanoke Va—p 315

Traumatic Salivary Fistula—Oppenheimer records a case of traumatic salivary fistula as a complication of the mastoid operation performed four years previously on a boy, aged 7, following an attack of measles

Maine Medical Association Journal, Portland

June 1920 **10**, No 11

*Operation for Cure of Weak Foot H A Pingree Portland—p 329

Tenoplasty for Weak Foot—The operation which Pingree prefers to all other methods in extreme cases consists in lengthening those tendons which are short and which hold the foot everted and the arches flattened, and in shortening those which are too long to give the required support This method presupposes a flexible foot, so far as disease is concerned, and aims to make the foot eventually self-supporting

Medical Record, New York

July 3 1920 **98**, No 1

Socially Maladjusted L P Clark New York—p 1
Diet and Health Amount and Kind of Food Required J Aulde Philadelphia—p 9
Headache from Standpoint of Ophthalmologist and Otolaryngologist E G Gill Roanoke Va—p 12
*Paralysis Agitans and Syphilis B Oettinger Long Beach, Calif—p 15
Nervous and Mental Mechanisms Nerve Impulse. W Steinach New York—p 17
Ripe Olives D W Montgomery San Francisco—p 19

Paralysis Agitans and Syphilis—In nine of twelve consecutive cases of paralysis agitans seen by Oettinger evidence that ranges from reasonably presumptive to certain that a some time syphilitic infection occurred, presents a sufficiently high percentage to be notable, and so, probably, merits further observations Interesting is the fact, that the blood Wassermann was negative in every case tested, including those instances where the history disclosed certain syphilitic infection and the further fact that one of these had previously given a positive blood and spinal reaction None of these patients presented symptoms that could be interpreted as characteristically syphilitic in origin Oettinger does not suggest that Parkinson's disease is a phase of syphilis, but it seems plausible that syphilis may be a determining factor in the disease by effecting loss in organic defense to a virus which finds its most potent expression in characteristic tissue change, namely degeneration to a greater or less extent of the corpora striata

Nebraska State Medical Journal, Norfolk

June 1920 **5**, No 6

State Care of Defectives L Crummer Omaha—p 153
Surgical Roentgen Ray H Everett Lincoln—p 157
Surgery of Thyroid C A Roeder Omaha—p 162
Doctor and His Cost System A T Tyler Omaha—p 168
Report of 5 000 Wassermann Tests E T Manning Omaha—p 170
Gall Bladder as a Seat of Secondary Infection E A Watson Grand Island—p 173

New Jersey Medical Society Journal, Orange

June 1920 **17**, No 6

Raynaud's Disease H P de Forest New York—p 181
Radical Cure of Inguinal Hernia J F Hagerty Newark—p 199

New York Medical Journal

July 3 1920 **112**, No 1

Diagnosis and Treatment of Gallbladder Affections M Einhorn, New York—p 1
Gastric Superacidity W V V Hayes New York—p 5
*Primary Sarcoma of Stomach S Basch New York—p 9
Infections of Gastro Intestinal Tract and Their Relation to Arteriosclerosis N P Norman New York—p 13
Diagnosis of Gastric Diseases M B Kunstler New York—p 18
*Operation for Radical Cure of Inguinal Hernia G Woolsey New York—p 21
Choledochitis Cholecystitis and Cholelithiasis B B V Lyon Philadelphia—p 23
Weight Diet and Efficiency R H Rose New York—p 27
Ulcer of Esophagus S Weiss New York—p 29

Sarcoma of Stomach—A woman, aged 22 whose father died of gastric cancer, was ill for one year with symptoms referred entirely to her stomach The clinical diagnosis of

intragastric tumor made by Basch was confirmed roentgenographically and by operation A typical Mayo cautery resection was made, followed by a posterior gastroenterostomy No other tumor masses were found Microscopic examination showed that the tumor was a large round cell sarcoma Fifteen months after operation the patient was entirely free from symptoms and had gained 50 pounds in weight Basch believes that these cases are far more common than has hitherto been believed to be the case.

Herniotomy Technic —The main features of Woolsey's method of operation are obliteration of the inguinal canal and the external abdominal ring, and fortifying this part of the abdominal wall by (1) suture of the entire thickness of the musculo-aponeurotic wall along the upper or inner margin of the incision to the deep surface of Poupart's ligament, (2) by overlapping the lower flap of the external oblique aponeurosis in front of the upper flap and (3) transplanting the cord so it will lie superficially to the aponeurosis Woolsey says he has been operating on hernias according to this method since 1895 but never published the technic.

July 10 1920 **112**, No 2

*Chronic Intestinal Toxemia A Bassler New York —p 45
Constipation and Effect of Purgatives on Heart and Vessels O Lerch New Orleans —p 48
Dietary Treatment of Constipation R Upham Brooklyn —p 53
Choledochitis Cholecystitis and Cholelithiasis B B V Lyon Philadelphia —p 56
Peptic Ulcer J S Diamond New York —p 60
Vomiting from a Surgical Viewpoint A W Hammer Philadelphia p 64
*Fibroma of Mesentery A Jacoby New Orleans —p 66

Chronic Intestinal Toxemia —The two measures which Bassler says his experience with thousands of cases have proven to be of the most value are diet and bacterial treatments The diet should be a carbohydrate and hydrocarbon one in the putrefaction (indolic) case, a high protein in the fermentation (saccharobutyric) case, and one of carefully weighed foods so as to keep down to a minimum caloric value in the mixed form Lactose by mouth is of no value, but the plan of feeding coarse uncrushed grains, somewhat sustains an acidity if a suitable bacteriology is present in the gut—which unfortunately is seldom met with in the putrefaction case, but when this is present a lactic acid carbon dioxid result can easily be accomplished What must always be kept in mind, by dietetic treatment alone, is that most of the infecting forms of bacteria in the gut are facultative and while they may be influenced favorably by diet, this is transitory and not dependable in therapy after a few weeks' time Since no purgation should ever be permitted in these cases, the bowels must be regulated by the well known dietetic and physical measures, and not even by irrigations or enemata of any sort The bacterial treatments are based on the findings in complete examinations of the stools and urine under known conditions of diet This diet should be the normal one for the age work and weight of the individual Suitable diet lists are given

Fibroma of Mesentery—Indigestion jaundice and constipation were the first symptoms complained of by Jacoby's patient Pain led the man to press his hands against his abdomen, and then he felt a mass which physicians later believed to be a "gas tumor but at operation it was found to be a tumor located in the mesentery and very close to the ileum Its removal could be considered only by a resection of that part of the ileum in the mesentery of which it was located The bowel was excised with the cautery, tied and the ends inverted with several rows of chromic catgut and one of silk The ends were placed side by side like the barrels of a shotgun and a lateral anastomosis done This method of anastomosis does away with the danger of fecal stasis in the blind ends of the gut Jacoby does not claim originality for the method

New York State Journal of Medicine

June 1920 **20** No 6

Relation of Hypertension and Hypotension of Membrana Tympani to Deafness and Tinnitus H Hays New York —p 173
Treatment of Muscular Anomalies E S Thomson New York —p 178
What Should Be Our Routine in Examining Cases of Squint? A Duane New York —p 181
Clinical and Bacteriological Study of Fusiform Bacillus Infection R R Mellon Rochester —p 187
Determination of Cardiovascular Lesions in Draft Soldiers Inducted into Service at Camp Gordon Ga and Efficiency of Methods Employed A MacFarlane Albany —p 190
Appendix to Report A C Snell Rochester —p 199

Pennsylvania Medical Journal, Athens

June 1920 **23** No 9

Modern Treatment of Corneal Ulcers O C Reiche Hazelton —p 49
Traumatic Cataract J W Park Harrisburg —p 494
Why Annual Asessment Must Be Increased J B F Wyant Kittanning —p 497
Qualification for Membership in a Medical Society J N Hunsberger Norristown —p 498
Our Responsibility for Membership s Ethics W H Maver Pittsburgh —p 500
Proposed Public Welfare Legislation J B McAlister Harrisburg —p 502
Legislative Possibilities F L Van Sickle Olyphant —p 503

Rhode Island Medical Journal, Providence

June 1920 **3**, No 6

Vascular Hypertension J P O Hare, Boston —p 103
Case of Lethargic Encephalitis D L Richardson Providence —p 108

Southern Medical Journal, Birmingham, Ala.

June 1920 **13**, No 6

Role of Digitalis in Cardiac Disease F A Jones Memphis —p 395
*Value of Large Single Doses of Digitalis in Treatment of Heart Disease G C Robinson St Louis —p 396
Case of Balantidium Coli Infection W O Nisbet Charlotte N C —p 403
*Ileocolitis N C Womack Jackson Miss —p 406
Treatment of Enterocolitis in Infancy W W Harper Selma Ala —p 408
Aftermath of Malaria Control in Extra Cantonment Areas J A LePrince Memphis —p 413
Control of Malaria for Railroad System H W Van Hovenberg Texarkana Ark —p 418
Relation of Drainage Projects to Malaria Control J I Herritage Jacksonville N C —p 424
Technic of Operations on Peripheral Nerves C C Coleman Richmond Va —p 427
Problems in Neurologic Surgery E Sachs S Louis —p 434
Choice of Operation in Senile Prostatic Hypertrophy O L Suggett St Louis —p 440
*Technic of Removing Ureteral Calculus without Operation A J Crowell and R Thompson Charlotte N C —p 446
Bronchoscopy T W Moore Huntington W Va —p 450
Foreign Bodies in Lungs, Eosophagus and Intestines E W Carpenter Greenville S C —p 451

Digitalis in Large Doses —The administration of the tincture of digitalis in large single doses of from 15 to 25 c c is advocated by Robinson as a useful method of treatment in certain cases of heart disease provided the tincture is standardized the dosage regulated and the patient is kept under close observation This method of administration not only brings the heart rapidly under the influence of the drug but also affords a more accurate means of studying its effect than the older methods of small repeated doses The use of large single doses is apparently not dangerous under the conditions specified Problems of dosage especially to body weight still need solution The beneficial effect of digitalis in cases with cardiac irregularity caused by auricular fibrillation is especially emphasized by Robinson s experience with large single doses in this condition

Calomel in Ileocolitis —In the medical treatment of ileocolitis Womack gives calomel from 1/24 to 1/48 grain and morphin, from 1/50 to 1/100 grain by mouth every three hour until the bowel quiets down from its continual spasm He believes that ileocolitis is mainly due to a gas producing bacterium that is an attenuated or malignant form of the colon bacillus There is always an attending pyelitis in which the colon bacillus in great numbers is found and this pyelitis may antedate, and certainly is the immediate complication of ileocolitis and assumes the major role from the standpoint of the cause of death Therefore in the treatment of ileocolitis first attention should be paid to the kidney Forced feeding of a selected carbohydrate diet with plenty of water should be given All forms of rectal irrigations or alimentation should strictly be interdicted on the ground that they not only do no good but are distinctly harmful

Removing Ureter Calculus Without Operat
catheter is inserted in o the ureter until it

Two c c of a 2 per cent solution of cocain or procain is slowly injected into the ureter at the site of impaction The ureteral spasm is so relaxed in a few moments that the catheter will usually pass beyond the stone where another injection of the anesthetic is made to further deaden the sensation The kidney pelvis is distended with a physiologic sodium chlorid solution and sterile olive oil is injected as the catheter is being removed In this way the pressure above the stone is increased and assists in expelling it, while the muscular fibers of the ureter are relaxed and the sensation is deadened This technic is repeated every second or third day, increasing the size of the ureteral catheter at each treatment

Southwest Journal of Med and Surg, El Reno, Okla

April 1920, **28**, No 4

Gunshot Wounds of Abdomen C A McGuire Kansas City Mo —p 69
Condition of Eyes Following Gas Attacks W A Cook, Tulsa, Okla —p 71
Hyperthyroidism (Toxic Goiter) A L Blesh and W W Ricks Oklahoma City —p 73

May 1920, **28**, No 5

Medical Treatment of Obstructive Peptic Ulcer P T Bohan, Kansas City Mo —p 85
Early Recognition of Cancer D Gann Jr —p 88
Visceral Ptosis O B Hall, Warrensburg Mo —p 95

Southwestern Medicine, El Paso, Texas

May 1920 **4**, No 5

Sequels of Tonsillectomy S A Schuster, El Paso —p 1
Focal Infections in Certain Grave Anemias J Vance El Paso —p 4
Importance of Blood Pressure Observation in Surgical Prognosis F H McMechan, Avon Lake Ohio —p 8

Texas State Journal of Medicine, Fort Worth

May 1920 **16**, No 1

Orbital Tumors E H Cary Dallas —p 7
Effect of Certain Intranasal Conditions on Extrinsic Muscles of Eye E M Sykes San Antonio —p 10
Treatment of Stricture of Esophagus J H Foster Houston —p 12
Drains and Drainage T J Bennett Austin —p 13
Symptoms and Diagnosis of Carcinoma of Stomach G V Brindley Temple —p 15
Parturient Eclampsia H Allison Kingsville —p 18
Country Doctor Moves to Town J Dildy Brownwood —p 19

June 1920 **16** No 2

Public Health Education R W Knox Houston —p 43
Memorial Address S R Hay Houston —p 49
New Age and New Red Cross C C S Biggs, Washington D C —p 51

Wisconsin Medical Journal, Milwaukee

May 1920, **18**, No 12

Influenza at Base Hospital 22 R C Brown Milwaukee —p 501
War Psychoneurosis W F Lorenz Mendota —p 506
Trephine Operation for Pyothorax A C Strachauer Minneapolis —p 511
Nausea and Vomiting of Pregnancy C H Davis Milwaukee—p 513
Doctor and Public Health C St C Drake Springfield Ill —p 518

June 1920 **19**, No 1

Cholelithiasis W Cunningham Platteville —p 1
Prevention of Trachoma in Military Camps N M Black Milkaukee p 5
Roentgen Ray as Aid to Diagnosis E A Smith Milwaukee —p 15
Present Status of Blood Pressure L M Warfield Milwaukee —p 19
Medical Service from Viewpoint of a Volunteer M R Wilkinson Oconomowoc —p 25
Mastoiditis Following Infectious Diseases in Army Cantonment E F Baur, Milwaukee —p 27

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

June 19 1920 **1** No 3103

Passive Mechanical Factor in Heart Disease Its Influence and Management A B Morison —p 817
*Deficiency Disease Special Reference to Gastro Intestinal Disorders R McCarrison —p 822
Poisoning by Arseniuretted Hydrogen F H Wignall —p 826
Ruptured Malarial Spleen Splenectomy Recovery C A Raison —p 827
*Syphilis Insontium J C McWalter —p 827
*A Case of Malignant Pustule in which Incubation Period was Known H H McCurrich —p 828
*Subcutaneous Injections of Camphor A D Gorman —p 828
Severe Angioneurotic Edema R Alderson —p 828
Herpes and Varicella C Wilson —p 828

Vitamin Deficiency Cause of Gastro-Intestinal Disorder—The importance of a study of the "dietetic history" in every case of gastro-intestinal disorder is discussed by McCarrison He claims that experience in Germany during the war has shown that children who are properly fed will be less liable to suffer from intussusception Other gastro-intestinal disorders probably connected in their origin or in their continuance with dietetic deficiency and lack of balance of the food are mucous disease of children, celiac disease, intestinal toxemia, and gastro-intestinal stasis They are readily produced by a diet deficient in vitamins and suitable protein while excessively rich in carbohydrates

Syphilis Insontium.—A case is reported by McWalter which he claims proves that syphilis infection can take place in the eight month of pregnancy

Malignant Pustule—The main points of interest in McCurrich's case are that the patient having contracted anthrax from a shaving brush, knew (*a*) when he cut himself, (*b*) when the painful papule appeared at the site of the cut, (*c*) when the papule became a vesicle It is also noteworthy that on admission to hospital, seven days after the onset of the disease, the patient had received no specific treatment and yet appeared to be well on the road to recovery

Injections of Camphor in Oil—Gorman has given intramuscular injections into the gluteal region of camphor in oil, 5 grains in 15 minims, every four hours without untoward results in a single instance

Japan Medical World, Tokyo

May 29 1920 **10**, No 22

Cases of Pneumectomy S Sato —p 469
Probiosis and Contrabiosis of Bacteria S Toguchi —p 469
Prophylactic Injection of Influenza R Tsuneoka G Takahashi and S Ozaky —p 469

June 5 1920, **10**, No 23

Pathology of Puerperal Eclampsia K Obata —p 493

Journal of Tropical Medicine and Hygiene, London

June 15, 1920 **23** No 12

Diagnosis and Treatment of Tropical Hepatic Abscess D Duckworth p 149
Cosmopolitan Sudan Skin Affections A J Chalmers and N Macdonald —p 150

Lancet, London

June 19, 1920 **1**, No 5051

Influence of Nerve Impulses on Visceral Disorders H T Gray —p 1299 To be continued
*Investigation and Treatment of Nephritis H MacLean and A E Russell —p 1305
*Factor of Fever in Diagnosis of Cancer W Gordon —p 1309
*Cerebral Reactions following Injections of Novarsenobenzol Two Fatal Cases F G Hitch —p 1311
*Traumatic Rupture of Heart R K Howat —p 1313
*Congenital Stenosis of Aorta R O Moon —p 1314
Obstruction Due to Formation of Spur After Finney's Operation R P Rowlands —p 1315

Protein in Nephritis—There does not seem to be any theoretical objection to giving protein or urea in large amounts to parenchymatous cases in which there is no retention of nitrogenous products in the blood In interstitial cases where such retention tends to be more or less well marked, it is generally considered that protein, especially in the form of meat, is on the whole, contraindicated There is, however, no proof whatever, in the opinion of MacLean and Russell that protein acts detrimentally even in advanced interstitial nephritis but, on general principles, it is probably best to limit the intake of protein in patients showing marked retention of nitrogenous products in the blood On the other hand, it seems quite certain that milder cases of interstitial nephritis are not benefited by very strict dietetic limitations As the result of very many observations, the authors are convinced that, in general, patients suffering from interstitial nephritis of moderate severity should be allowed a fairly liberal diet in which protein need not necessarily be cut down to any great extent In very severe cases it is probably best to depend chiefly on carbohydrate food

Significance of Fever in Cancer—The fever of cancer uncomplicated by inflammatory lesion is termed "growth fever" by Gordon on the assumption that the fever is produced by some process of the growth itself apart from inflammation, and the fever caused by any inflammatory complication of a cancer, he terms "complicated fever Gordon classifies cancer according to the type of fever occasionally found in conjunction therewith A. Either growth fever or complication fever liver stomach suprarenals, lung with mediastinum, long bones, breast (rarely) B Complication fever only gallbladder, bile ducts large intestine, small intestine, appendix uterus, fallopian tubes, ear, glands in neck, tongue lip, esophagus, pancreas, peritoneum, rectum, eye larynx, thyroid C Neither form of fever kidney, ovary, vulva, testis, penis, urethra, parotid, jaw, brain, spine, skin, muscles, heart and pericardium

Cerebral Reactions Following Use of Neo-Arsphenamin—The conclusion arrived at by Hitch is that the widespread capillary hemorrhages, demonstrated by microscopic sections, afford a clear anatomic basis for the hypothesis put forward by Dudley that the symptoms are due to anoxemia, that this anoxemic condition is mainly produced by interalveolar hemorrhage into the lungs, and to a less extent by interstitial capillary bleeding into other organs, and that the continuous administration of oxygen offers the best hope of recovery in these unfortunate cases These appearances would also seem to explain in part the rapid development of the symptoms and the comparatively slow recovery, as instanced by Parnell's case resulting from the continuous administration of oxygen

Traumatic Rupture of Heart, Liver and Kidney—A well built man, aged 23 years, sustained a clean unbroken fall of 45 feet, alighting on a wooden plank and some steel plates lying on the ground He was not killed outright, but was dead on his arrival at the hospital twenty minutes later On postmortem examination of the body, preliminary inspection revealed no damage beyond a few scratches and bruising at the right elbow A deliberate examination by inspection and palpation showed no further evidence of bruising laceration, fracture, or dislocation The peritoneal cavity contained about 2½ pints of fluid blood of which the source appeared to be five transverse lacerations of the right lobe of the liver—four on its upper, one on its under surface immediately to the right of the transverse fissure There was a considerable quantity of blood effused into the retroperitoneal tissue There were two transverse tears about half an inch apart on the front of the right kidney near its middle, one through little more than the capsule, and one about ¼ inch in depth through practically the entire width of the kidney No other source of retroperitoneal hemorrhage was found No other abdominal injury was discovered The pericardium was intact and contained about a pint and a half of human blood A slitlike opening into the cavity of the left auricle was found, about 0 25 cm in length and situated exactly in the length of the free edge of the left auricular appendage

Congenital Stenosis of Aorta—The special points of interest in Moon's case are the very few symptoms calling attention to the heart, combined with the pronounced physical signs and the comparatively slight impairment of the patient's general activity The patient was 11 years old He had a congenital stenosis at the level of the aortic valves He was always active and energetic and could always walk a fair distance and even play football without becoming breathless or tired, though he got breathless sooner than other boys In general appearance he was distinctly undersized, very pale but bright and intelligent looking The apex beat was in the fifth space in the nipple line with a somewhat forcible cardiac impulse and the dulness was increased a trifle to the left Over the aortic area there was a very coarse systolic thrill, which was also palpable over the carotid arteries All over the precordial area there was a harsh systolic murmur, having a maximum intensity at the second right interspace where it could be heard several inches from the chest wall Pulse was small in volume, rate 70 In the electrocardiogram the T-wave was inverted in Leads II and III while in Lead III the P-wave was inverted. There was no evidence of left-sided preponderance

June 26 1920 **1** No 5052

*Influence of Nerve Impulses on Visceral Disorders H T Gray—p 1345
Treatment of Convalescent Soldier T E Sandall—p 1352
*Post alvarsan Jaundice R Hallam—p 1356
Surgery of Congenital Hypertrophic Stenosis of Pylorus R Warren—p 1359
*Fistula of Parotid Improved Method of Cure H Curtis—p 1360
Assessment of Hand Injuries J J Scanlan—p 1361
Enterococcus as Factor in Certain Types of Dysentery S M Ross and C F Peckham—p 1362
*Two Cases of Intestinal Obstruction W E Tanner—p 1363
*Hair Ball in Ileum Causing Obstruction H R Gibson—p 1363
Lateral Intestinal Anastomosis Through Vagina J G Watkin—p 1364
Right Mastoid Suppuration Causing Left Sided Facial Paralysis E W Williams—p 1364

Nerve Impulses as Cause of Visceral Disorders—The aim of Gray's study of more than 300 intestinal cases has been to show that there is a large group of visceral disorders primarily initiated by a derangement of normal nerve impulses It is a law of the intestine that increased work is always responded to by increased effort leading to hypertrophy This truth is exemplified clinically in the results of mechanical obstruction in every part of the gastro-intestinal tract, while, physiologically, it has been demonstrated by the work of Bayliss and Starling No such hypertrophy is ever seen in the visceral disorders under discussion, and this fact alone constitutes an a priori refutation of any mechanical origin as applied to the bowel itself The establishment of attenuation and muscular relaxation of the colon so characteristic of this group of disorders is only possible if this physiologic response to an increase of work is prevented, either by primary intramural disease or by prolonged active inhibition of its musculature due to abnormal direct or reflex nerve impulses The role of the mesentery is to carry vessels and nerves to and from the intestine and never to act as a supporting structure, when it so acts (e g, in congenital mobility of the colon) mechanical stimulation of the contained nerves results The truth of this is evidenced experimentally and at operations Gray asserts that it is equally true pathologically

Jaundice After Arsphenamin Injection.—Attention is directed by Hallam to the prevalence of jaundice occurring during the treatment of syphilis with arsenobenzol preparations, and he shows that it is relatively more frequent with some preparations than with others Clinically, the attacks are usually very similar to the ordinary catarrhal jaundice The patient usually recovers in from two to six weeks Cases, however, have been recorded which have commenced as apparently a mild attack but have become progressively worse and terminated as acute yellow atrophy For this reason alone although this occurrence is rare, jaundice developing either before or after treatment of syphilis is of extreme importance Hallam analyzed a series of cases in order to determine what might have caused this complication It occurred relatively more frequently after the use of arsenobenzol preparations (neosalvarsan, neokharsivan novarsenobillon, etc), but the causation is as yet undetermined

Operation for Fistula of Parotid—Curtis describes a seton operation which effected a cure in two cases of fistula

Intestinal Obstruction by Hair Ball—Two cases are reported by Tanner (1) obstruction of the small intestine by a large hair ball and (2) strangulation of the small intestine by the appendix acting as a band He claims that no case like the first is on record

Hair Ball in Ileum Causing Obstruction.—Gibson cites the case of a boy aged 6 years from whose ileum he removed a hair ball which had caused obstruction

Medical Journal of Australia, Sydney

May 22 1920 **1** No 21

Four Cases of Syphilis of Central Nervous System I Morgan—p 477
Cerebral Syphilis H G Allen—p 481
Surgery as It was Practiced Thirty Years Ago N J Dunlop—p 482
Selecting Suitable Donors for Blood Transfusion R. Dick—p 496
Bronchitis Due to Empyema of Maxillary Antrum A E Mills—p 487

May 29 1920 **1** No 22

Special Military Surgery R Davies—p 501
Infantile Hernia, Enormous Hernia and Gibbon's Hydrocele R. H Russell—p 505

Bulletin Medical, Paris

May 22 1920 **34**, No 27

*Respiratory Insufficiency of the Apex E Sergent—p 469

Respiratory Insufficiency of the Apex—Sergent refers to a functional hypocapacity of the apex, usually bilateral, and usually associated with malformation of the bony frame of the chest, low index of robusticity, anemia, asthenia and often adenoids Not enough air gets into the apex The region does not share in ample excursions, and the respiratory muscles and diaphragm are weak, the habits of breathing defective, but with careful examination the danger of mistaking this functional hypocapacity for tuberculosis can be avoided Breathing exercises, the spirometer, and restoring the permeability of the nasopharynx will generally restore clinically normal conditions

Bulletins de la Societe Medicale des Hôpitaux, Paris

May 7 1920 **44**, No 16

*Is Acute Febrile Chorea Epidemic Encephalitis? P Harvier and C Levaditi—p 583
*Treatment of Chronic Tuberculous Infections with the Salts of Cerium Metals H Grenet and H Drouin—p 589
*Chemotherapy of Tuberculosis with Sulphates of Cerium Earths L Renon—p 602 Idem Esnault and Brou—p 606
Continuous Pylorospasm with Chronic Dilatation of the Stomach F Ramond and R Clément—p 616
Reduction of Vesicular Murmur of Right Lung with Catarrhal Jaundice and Gallstones F Ramond Vincent and R Clement—p 619
Atypical Meningeal Reaction and Cardiac Lesions in Miliary Tuberculosis G Brouardel and P Fatou—p 621
Meningococcus Purpura A Netter and others—p 630
Tuberculous Meningitis after Antirabies Treatment P Carnot and C Gardin—p 633
Lethargic Encephalitis Rieux and others—p 636 646 648 650
Emetin in Treatment of Hemoptysis C Colbert and R Bazin—p 641
Treatment of Epilepsy with Phenylethylbarbituric Acid C Vincent—p 644

Febrile Chorea and Epidemic Encephalitis—Harvier and Levaditi think that certain cases of acute febrile chorea are a manifestation of acute epidemic encephalitis, basing this assumption on the histologic findings in a case described in detail and the effects of inoculation of animals with the nerve centers Souques has reported two similar cases, in one the acute chorea merged finally into typical lethargic encephalitis

Treatment of Tuberculosis with Salts of Cerium.—This communication from Grenet and Drouin, relating their success in treating different forms of chronic tuberculous infection, is a logical sequence of the research on cerium and other uncommon metals which Renon, Frouin and others in France have been conducting [for eight years] in tentative chemotherapy of tuberculosis Two facts seem to be established namely that the salts of the cerium earths reduce the fats of the tubercle bacillus in cultures to which these salts have been added, and that these salts induce a mononuclear leukocytosis in man and animals Grenet and Drouin selected the sulphates of samarium neodymium and praseodymium and here report a year's work with the clinical application of these cerium metals They inject by the vein from 2 to 5 c c of a 2 per cent solution for twenty days, then suspension for fifteen or twenty days and then a second and a third series of injections They summarize the details of 8 cases of tuberculous glands, 10 of lupus, 5 of verrucous tuberculous lesions, 8 of erythematous lupus, and 23 of pulmonary tuberculosis The external tuberculous lesions healed and chronic apyretic pulmonary tuberculosis showed considerable improvement if not an actual cure The general health improved the expectoration became less purulent and less profuse, the physical signs became modified and disappeared and the bacilli sometimes disappeared from the sputum or if they were still found in the sputum they showed extremely pronounced modifications and took stains badly Three guinea-pigs inoculated with these modified bacilli, after losing weight for two weeks had regained their health by the end of two months A fourth recently inoculated, shows no signs of disease confirming the great reduction in the virulence of the bacilli Grenet and Drouin add Will the latent and well tolerated lesions flare up again? Time alone will tell but the improvement in all seems to be continuing and the apparent cure has persisted now for several months

The results, such as they are, are very interesting a direct action on the bacillus, an action on the human organism by favoring the production of sclerosis, perhaps on account of the enormous mononuclear leukocytosis induced" In conclusion they reiterate that these cerium salts should be used with pulmonary tuberculosis only in the afebrile cases, stopping at once if fever develops "If these precautions are not observed, discredit may be brought on a method which is still only in the period of being studied, but which already seems to offer real hope"

Salts of Cerium Metals in Chemotherapy of Tuberculosis—Renon reviews his eight years of research on a large number of salts of not commonly used metals, hoping to find some that would reduce the virulence of the tubercle bacilli in the organism while rendering the soil of the organism less favorable for its development The sulphates of some of the cerium metals reduce the fats of the tubercle bacillus from 25 or 40 per cent to 22 or 16 per cent He mentions other salts which induce mononucleosis in man and animals but are too toxic for clinical use, and adds, "The results obtained by Grenet and Drouin with the sulphates of the cerium earths are certainly the most scientific yet realized in the chemotherapy of tuberculosis In controlling their results, their technic must be carefully followed, and the warning heeded that in acute forms of tuberculosis no benefit follows and the lesions may even be aggravated" In the five cases he has just begun to treat, the injections are well tolerated and the leukocytosis has run up from 10,000 to 20 000, 26,000 or 40,000 with from 18 to 23 per cent mononuclears

Sulphates of Cerium Metals in Pulmonary Tuberculosis—Esnault and Brou report their experience with the Grenet and Drouin method in twenty cases, and say that the number of cases of unquestionable improvement is impressive if the gravity of the cases is taken into account, and it permits the highest hopes of progressive improvement to a cure This will be the rule they say, when treatment is applied in the early stage without waiting for advanced pulmonary lesions They add that as the treatment seems to act on the tubercle bacilli alone, it might be advisable to add some medication to act on the secondary infections [Frouin in a communication read before the Paris Academie de medecine, April 6, 1920 reported encouraging results from the application of the salts of earths of the cerium group to torpid suppurating ulcerations He stated that 2 or 4 per cent solutions of these salts and especially of the sulphates of the cerium group promoted healing, hastening the formation of derma and epithelium layers and seemed to have an antiseptic action while less irritating than the nitrates and chlorids L Renon also has been studying since 1912 these salts of cerium metals in the chemotherapy of tuberculosis, and in a communication read at the Academie de medecine, March 4, 1920, he referred to his work and the difficulty of such research, as it requires study of the action of the chemical on cultures of the bacillus study of the toxicity of the chemical for animals, at least for the dog rabbit and guinea-pig, if the toxicity is slight, study of its action on experimental and spontaneous tuberculosis in animals and then in human tuberculosis Chemotherapy he said, might be aided by withholding from the tuberculous those substances such as potassium, magnesium phosphorus, sulphur and iron which seem to be indispensable for the proliferation of bacteria in culture mediums He lists nearly two dozen salts of rare metals which have an inhibiting influence in vitro on the tubercle bacillus, among them he mentions cadmium fluorid and chlorid neodyme sulphate and praseodyme sulphate, lanthane sulphate, and the salts of bismuth, of silver, of gold, of selenium, etc]

Lyon Medical

May 25 1920 **129**, No 10

Tuberculous Nature of Gastric Ulcer Mongorge—p 429
The Role of the Lamblia in Intestinal Pathology F Deglos—p 434
Compulsory Notification of Tuberculosis Piéry—p 464

Tuberculous Nature of Simple Ulcer of the Stomach—Mongorge argues that simple ulcer is of toxi-infectious

origin, and as tuberculosis is the toxi-infectious disease *par excellence* and as Jaksch and Brinton assert that 25 per cent of patients with simple gastric ulcer die of pulmonary tuberculosis, the conclusion seems evident that round ulcer is often of tuberculous origin He summarizes ten personal cases in which the round ulcer developed in a tuberculous patient, or pulmonary tuberculosis developed in persons with gastric ulcer In another case hemoptysis from pulmonary tuberculosis seesawed with hematemesis from a gastric ulcer In one case there was a sequence of round gastric ulcer at 30 pulmonary tuberculosis at 36 and lupus at 45 All were cured in turn, and the woman, now 50, is in good health

June 10 1920 **129**, No 11

*Familial Diseases J Audry —p 469

Familial Diseases and Malformations—Audry reviews the literature on this subject, citing among others Sanger Brown's case with cerebellar heredo-ataxia in five generations, with 25 cases among the 55 members Audry himself has encountered a family with 15 cases of hemorrhagic telangiectasia in four generations Truc was able to trace hemeralopia through ten generations in the Nougaret family, 137 having had night blindness among the 2 137 members Certain regions seem to predispose to hemophilia, such as southern Germany and Switzerland The Gintrac district statistics include 48 German, 9 Swiss and 8 French families with hemophilia The czarevitch was a hemophiliac as also the sons of Henry of Prussia and their mother, who is the sister of the former Emperor Wilhelm Among the instances of familial malformations cited, Audry mentions the nevi found in the Drieux family from the fifteenth century to date Baroux found records of the nevi in 41 female members of the family and all at the same points, places where the armor exerted pressure in the early days of the family The village of Yzeaux, in Audry's own region is noted for the six fingers and toes of the inhabitants Potton in 1829 and 1836 published an account of this community malformation, the records showing that in the eighteenth century nearly all the inhabitants were *sexdigiti* Devaix confirmed this in 1862, but Benard has recently reported that the anomaly is dying out, only three families with polydactylia being discovered there now It seems to be the rule that with familial malformations and diseases of a continuous heredity type if the subject is sound, no restrictions need be imposed on marriage, and the same applies to the male descendants in families with familial disease transmitted by the mother Familial diseases of the fraternal or recessive type such as deafmutism and pigmented retinitis are less inclined to reappear than the others mentioned above but consanguineous marriages no matter how remote the connection, are sometimes highly dangerous

Paris Medical

May 22 1920 **10** No 21

*General Paresis in Tuberculosis S Roque and V Cordier —p 417
Pilomotor Reflex with Paresthetic Meralgia Andre Thomas —p 422
*Acute Pulmonary Edema and Blood Pressure L A Amblard —p 425

General Paresis in Tuberculosis—Roque and Cordier describe a case of apparently typical paretic dementia in a man of 50 with pronounced tuberculosis of long standing and syphilis acquired thirty-four months before death Necropsy revealed tuberculous meningitis and old tuberculous lesions in the cortex They do not venture to decide whether the case is one of general paresis masquerading as an ordinary lesion or whether the tuberculous leptomeningitis realized the syndrome of syphilitic general paresis

Acute Pulmonary Edema—Amblard states that, in his experience, the persons who developed acute edema of the lungs always had a history of hemoptysis at some time or blood streaked sputum possibly ascribed mistakenly to tuberculosis, or after trauma In two cases in which the pulmonary edema developed under his eyes he noted that the high blood pressure ran up still higher, both the minimal and maximal pressure showing a rise of several degrees Then suddenly the pressure dropped, the maximal from 280 to 140 mm mercury for example, the minimal from 180 to 100 while the pulse ran up from 70 to 130 Venesection tided through the period of dyspnea but the heart was still unequal to its task and the blood pressure never returned to its former figure Although the latter was abnormally high yet this was necessary to ensure adequate circulation even although this was still below normal Each attack reduces it still lower The onset in each is sudden but each is always preceded by the giving way of the ventricle, then the blood pressure drops and this in turn is followed by the acute edema in the lungs but the heart action keeps up and there is no arrhythmia The cause of the sudden weakening of the ventricle is still a mystery, he says, but much can be accomplished in treatment with drugs to combat it and dieting to relieve the kidneys of all unnecessary work The prompt benefit from venesection cannot be from reduction of the blood pressure as this is not accomplished by clinical venesection, nor from escape of toxins, as this is likewise insignificant and the effect would be more gradual nor from modification of the composition of the blood, as this could not occur so promptly

Presse Medicale, Paris

June 2 1920 **28** No 36

*Urobilinuria M Labbe and P A Carrie —p 353

Urobilinuria—Labbe and Carrie reaffirm that urobilinuria is evidence of functional insufficiency of the liver The bile pigments entering the bowel become transformed into urobilin Part of this is voided in the stools (stercobilin) but the rest is reabsorbed and carried to the liver The liver utilizes it anew probably to make bilirubin, but if the liver is not functioning properly, some of the urobilin passes through it unmodified and gets into the blood and passes from the blood into the urine Urobilinuria thus requires (1) the presence of stercobilin in the intestines which implies the permeability of the biliary passages and (2) functional insufficiency of the liver There can be no urobilinuria at the height of jaundice from retention In a recent case a man with chronic jaundice from obstruction of the bile ducts by a lesion in the pancreas had no urobilinuria not even after the liver functioning had been relieved by fastening the gallbladder to the skin so that bile production and evacuation proceeded practically normally except for the participation of the intestines A second operation joined the gallbladder to the small intestine the only change from the previous condition was that the bile entered the bowel instead of being voided through the fistula and urobilin promptly appeared in the urine anew Of course bilirubin may become transformed into urobilin elsewhere than in the bowel but this is exceptional and comparatively insignificant Fischler's dogs with a bile fistula had no urobilinuria unless they were allowed to lick the bile from the fistula or were given bile by the mouth or were injected by the vein with distilled water the latter confirming the possible hematic origin although under conditions scarcely realizable in the clinic

Revue Franç de Gynecologie et d'Obstet, Paris

April 1920 **15** No 4

*Spinal Anesthesia P Delma —p 145
*The Minimal Blood Pressure with Hemorrhage P Balard —p 154
Retention of Urine from Genital Tumor G Devierre —p 161
*Fatal Embolism in Course of Pregnancy S Remy —p 172

Spinal Anesthesia for Gynecologic and Obstetric Operations—Delmas expatiates on the superior advantages of spinal analgesia for these interventions and especially when done with cocainized spinal fluid an ampule of 0 02 gm cocain being dissolved in the spinal fluid for a fifteen minute operation

The Minimal Blood Pressure with Hemorrhage—Balard refers in particular to severe puerperal hemorrhages saying that the maximal arterial pressure gives no indication of the actual decline of the blood pressure in these cases In four cases described in detail the minimal pressure of 5 was the extreme limit, these patients dying while all recovered with

a minimal pressure of 7, although the clinical picture seemed identical in all

Embolism Early in Pregnancy—Remy reports a case in which the mild phlebitis of the internal saphenous vein entailed sudden and fatal embolism, it happened to occur during the physician's casual call to inspect the phlebitis The woman was lying quietly in bed at the time In Lancereaux' case the embolism occurred with phlegmasia of both legs, the patient recovering In three other cases the embolism was fatal, although the phlebitis was insignificant Possibly citric acid might ward off embolism

Rivista di Clinica Pediatrica, Florence

April 1920 **18** No 4

*Scurvy in Children U Franchetti—p 193
Should Foundlings Asylums Be Abolished? R Fusi—p 211
*Progressive Lenticular Degeneration A F Canelli—p 232

Scurvy in Children—Franchetti reports a case in which the retrospective diagnosis was chronic scurvy without any acute phase Before the age of 3 there probably was an unsuspected stomatitis which interfered with normal eating so the child refused to eat anything but boiled milk and coffee At 3, and again at other periods later there was painful paraplegia, sometimes with stomatitis maintaining the vicious circle Neuritis was diagnosed, and although the physician ordered a change of diet this was not enforced At 5 the roentgenograms showed extreme dystrophy of the bones in and near the knees and the painful paraplegia, cachexia and anemia were severe with absolute anorexia, but there never had been any tendency to hemorrhages

Progressive Lenticular Degeneration—Canelli analyzes what has been published on this disease since Wilson's description of it in 1912 Higier has reported on a family in which the father at 30 developed paralysis agitans and one child has this Wilson's disease and another the Westphal-Strümpell pseudosclerosis In Schutte's case the clinical course suggested the former, the necropsy findings the latter

Archivos Latino-Amer de Pediatria, Buenos Aires

March April 1920 **14**, No 2

Subacute Meningitis J Bonaba and V Zerbino—p 97
Scrap of Glass in Lid for Six Years J de Salterain— 105
Meningitis in Two Months Infant A Rodriguez Castro—p 107
*Serotherapy for Defective Development C Ferreira—p 109
*Oculomotor Paralysis in Infant J P Garrahan—p 114
Traumatic Rupture of Spleen in Boy A Buzzi—p 122
Classification of Dyspepsia in Infants Martagao Gesteira—p 129

Horse Serum in Treatment of Dystrophy and Hypotrophy in Infants—Ferreira confirms R Freeman's statements in regard to the stimulating action of horse serum when an infant is not developing properly It seems to whip up the sluggish metabolism and nutrition in general so that the child afterward progresses more or less normally He injected it in three cases here described One of the infants weighed only 3,750 gm at the tenth month when the serotherapy was started and the benefit was so unmistakable that it was kept up for sixteen months the child having thus been given 2 386 gm of the serum and its weight showing a regular increase He began with 2.5 c c but soon reached the dose of 20 c c repeated two or three times a week A 3 months babe improved so rapidly after the serotherapy was begun that the latter could soon be dropped the improvement continuing thereafter *None of the three infants was entirely breast fed*

Oculomotor Paralysis in Infant—The paralysis persisted unmodified for a month, but subsided completely as soon as tentative antisyphilis treatment was begun

Brazil Medico, Rio de Janeiro

March 6 1920 **34**, No 10

*Prognosis with Angina Pectoris Pinheiro Guimarães—p 151
Action of Currents of Air on the Frog M Ozorio de Almeida—p 156
Prophylaxis of Influenza Nery da Costa—p 157

Prognosis of Angina Pectoris—Pinheiro warns of the harm from suspending the Damocles sword of angina pectoris over the head of a person suffering merely from the effects of swallowing air or of some neuropathy A history of intoxications and infections is instructive, especially syphilis, and alcohol and tobacco poisoning On the whole, he reiterates, nothing justifies a definite prophecy as to the immediate outcome, the symptoms, evolution and pathologic anatomy being so widely diverse in different cases He gives the details of a number in which the orders to lead a quiet life were disregarded, and a recurring attack proved fatal within a few months One man of 42 has had several attacks but two years have passed and he is still active This patient has a low blood pressure and weak heart sounds

Semana Medica, Buenos Aires

Feb 12 1920 **27** No 7

Peduncular Hemorrhage A Bergman and M Rue—p 213
*Auscultation of the Fetus H Colmegna and S Varalla—p 219
History of Insanity in Argentina J Ingenieros—p 220
Public Hospitals and Charities System in Uruguay Cont—p 233

Auscultation of Twin Pregnancy—Colmegna and Varalla report a case and cite two others which confirm the differential importance of auscultation of a single and intense focus of fetal heart sounds in the clinical picture of hydramnios The fetal heart beat is heard exceptionally distinctly at a single point This is actually pathognomonic with twin pregnancy when hydramnios obscures the clinical findings

Feb 19 1920 **27** No 8

*Absorption of Solid Particles by Peritoneum J Dutrey—p 249
Tuberculin in Surgical Lesions O Copello—p 253
*Papillomas in Child Larynx A Quadri—p 254
Advantages of Film Treatment of Burns V Conti—p 263
The International Congress of Medical Women Alicia Moreau—p 276

Absorption of Solid Particles in the Peritoneum.—Dutrey's research has confirmed that the lymphatics, omentum and diaphragm take up and retain for a time at least the solid particles injected into the peritoneal cavity The blood vessels do not seem to share in this task, none of the particles of India ink injected having ever been refound in the blood vessels There do not seem to be any direct routes of connection between the peritoneal cavity and the spleen, liver and kidneys The few leukocytes containing any of the particles which were found in these organs had evidently found their way to them by way of the lymphatics and thoracic duct

Papillomas in Child Larynx—Quadri has had one case in which multiple papillomas in the larynx retrogressed so that the child now 11 has no further inconvenience or danger from the tumors, he first saw the papillomas at the age of 2 Another girl required tracheotomy on account of a second recurrence after operation The one small tumor left was coughed up later He thinks that probably many cases of papilloma escape detection and the tumors retrogress later His practice is to remove the tumors even in emergency cases, thus avoiding tracheotomy unless absolutely compelled, supplementing the surgical measures with arsenic internally He advocates radium treatment after tracheotomy but warns that without this it is liable to induce suffocation from the congestion it induces and thus compel an emergency tracheotomy, as occurred in one of his cases

Siglo Medico, Madrid

April 17 1920 **67**, No 3462

Hemorrhagic Septicemia Muñoyerro and Calvin—p 281
Pathology of Suprarenals in Tetanus C Sabucedo—p 283
Treatment of Typhus J Francos Rodriguez—p 284

April 24 1920 **67** No 3463

Epidemic of Measles B Hernandez Briz—p 301
*Epileptiform Seizures Under Neo Arsphenamin J Bejarano—p 302

Epileptiform Seizures Under Arsphenamin—The young man had been given two injections of neo-arsphenamin at a week interval (0 15 and 0 3 gm) and two days later he had two severe epileptiform seizures with loss of consciousness for two hours He had never had anything of the kind before but it was learned later that a brother was epileptic Henceforth Bejarano intends to investigate the family as well as the individual antecedents before giving arsphenamin

Deutsche medizinische Wochenschrift, Berlin

Jan 22 1920 **46**, No 4

Traumatic Psychoneuroses M Reichardt —p 89
*Silver Arsphenamin in Treatment of Syphilis F Hahn —p 92
*Blocking of the Splanchnic Nerves G Buhre —p 93
*Treatment of Tetanus by Multiple Routes Eberle —p 94
Operations in Penetrating Gunshot Wounds O Heinemann —p 96
Operations for Inguinal Hernia in Infants Kern —p 97
*Laryngeal Perichondritis Simulating Thyroiditis A Bruggemann —p 97
Was it Murder or Suicide? Schütz —p 99
*Nitrobenzene Poisoning from Delousing Remedy L Wolpe —p 100
The Mortality in Denmark During the War Prinzing —p 100
Dermatologic Hints for the Practitioner M Joseph —p 101

Silver Arsphenamin in Treatment of Syphilis—Hahn has been using silver arsphenamin for two years and now reports the results, after treating 300 syphilitics and giving nearly 4 000 intravenous injections He endeavors to justify his standpoint that syphilis early diagnosed should be treated energetically and with large doses of arsphenamin, even though there may be some risk involved He regards silver arsphenamin as the best form of arsphenamin, saying that in its action it is much superior to arsphenamin sodium and neo-arsphenamin, and is at least equal if not superior to arsphenamin (old salvarsan) He adds that silver arsphenamin is to be put on the market soon He used no mercury or other medication in connection with the silver arsphenamin treatment, though he admits that possibly better results might be secured with a combination of silver arsphenamin and mercury On account of the dark brown color and the lesser solubility, silver arsphenamin is more difficult to inject than arsphenamin sodium and neo-arsphenamin Injections improperly given are painful He gives ordinarily 0 1 gm as an initial dose for both men and women and has seen no pronounced bad effects He uses a 1 to 1 5 per cent. solution Twelve injections of 0 25 gm each given twice a week (3 gm in all) constitute a vigorous course of treatment

Blocking of the Splanchnic Nerves for Operations on the Upper Abdomen—Buhre describes the Braun method of blocking the splanchnic nerves for operations on the upper abdomen, after the abdomen has been opened by a median incision He has used the method in 104 cases and found the technic remarkably simple The anesthetic effect is prompt and lasts from one and a half to two hours, and no danger for the patient is involved He therefore recommends it as the method of choice in all operations on the upper abdomen, especially gallstone operations

Serotherapy of Tetanus by Multiple Routes—Eberle reports three cases of tetanus in which on the fifth to the seventh day after the appearance of the first symptoms he treated the patients with intracranial, subdural and intraspinal antitoxin injections, according to the Betz-Duhamel technic No improvement followed and the three cases resulted fatally H Smidt has also reported eight cases of tetanus which were treated by the same multiple routes the serotherapy being begun in from six to twenty-four hours after the first symptoms became manifest but all these patients died likewise Eberle expresses the wish that all who have had experience with this direct method of serotherapy might report their results Betz and Duhamel reported three recoveries in four severe cases and others similar experiences so that there was a record of eight recoveries in ten severe cases of tetanus, until the Eberle and Smidt series of eleven fatal cases

Laryngeal Perichondritis Simulating Thyroiditis.—Bruggemann reports a case of acute laryngeal perichondritis, in which edematous swellings appeared on the outside of the throat simulating the picture of acute thyroiditis Sensitiveness to pressure was however, confined to the larynx which ruled out thyroiditis Pressure symptoms elicited in the thyroid were doubtless due to the fact that in pressing on the thyroid a certain amount of pressure is brought to bear on the larynx

Nitrobenzene Poisoning Following Use of Delousing Remedy—Wolpe reports two cases of nitrobenzene poisoning in two children of 10 and 12 Their mothers had used on their heads a delousing remedy containing nitrobenzene The writer demands that druggists be restrained from dispensing nitrobenzene unless the buyer holds a special permit, and that the use of nitrobenzene in delousing remedies and in cosmetics in general be prohibited by law

Medizinische Klinik, Berlin

April 25 1920 **16** No 17

The Genesis of Poisons in the Blood H Freund —p 438
Cesarean Section on the Dead and Moribund Linzenmeier —p 439
*Congenital Luxation of Hip Joint S Peltesohn —p 442
Urobilinogen Urochromogen and Diazo Reactions in Urine of the Tuberculous K Dietl and B Szigeti —p 444
Syphilitic Aortitis and the Wassermann Reaction G Bock —p 447
The Increase in Chancroid Infections in Berlin E Borchard —p 449
Changes in the Working Muscle O Meyerhof —p 451

May 2 1920 **16**, No 18

Toxic Desquamative Inflammation of the Esophageal and Gastric Mucosa H Eichhorst —p 463
Harmlessness of Postpneumonic Rales in Children P Karger —p 466
Artificial Respiration in Morphin Poisoning by Puncture of the Trachea E Becker —p 467
Paratyphoid Bacteriuria G Herrnheiser —p 469
Zygomaticitis with Otitis Media A Seligmann —p 471 Continued
Local Oil of Turpentine Injections in Adnexitis Hartog —p 474

Diagnosis and Treatment of Congenital Luxation of the Hip Joint in Infants—In view of the great advantage of the early diagnosis and immediate reduction of a congenital luxation of the hip joint Peltesohn emphasizes that physicians should take pains to examine the hips as reduction of a luxation during infancy is usually child's play, whereas after the child has begun to walk it becomes increasingly difficult The ordinary circular plaster cast cannot be used on infants as it cannot be kept clean but he recommends and describes in detail a special splint that he has found very useful in dealing with infants

Munchener medizinische Wochenschrift, Munich

Jan 23 1920 **67** No 4

*Nonspecific Increase of Function W Weichardt —p 91
Tuberculous Infection and Constitutional Diathesis A Wolff Eisner —p 93
*Water Put Up in Ampules for Intravenous Injections G L. Dreyfus —p 95
*Osteomalacia in Munich Heyer —p 98
*Eosinophilia in Muscular Rheumatism I Synwoldt —p 98
*Hemorrhage of Lung from Puncture M Flesch Thebesius —p 99
Prophylaxis of Venereal Diseases I Jensen —p 100

Nonspecific Promotion of the Functional Capacity—Weichardt approves the term "activation of protoplasm" to express the peculiar promotion of the functional capacity of the entire system by various means, such as by exercise by getting rid of fatigue products, by vaccination but most strikingly perhaps by protein therapy parenteral injections These whip up the organism to increased functional achievement a nonspecific *Leistungssteigerung* The effect is not that the function is altered it is merely intensified The response varies in the normal and in the diseased, and in normal regions and in pathologic processes He reviews the recent literature on the subject citing in particular experiments with preliminary intensive radiation inunction of mercury or sweating procedures etc, to enhance the effect of the protein therapy

Water in Ampules for Intravenous Injections.—Dreyfus finds it a very convenient and safe method for arsphenamin injections to use distilled water that has been put up in sealed ampules Thus stored distilled water may be kept for years unimpaired but the ampules must be made of very hard glass that will give off little or no alkali

Osteomalacia in Munich—Heyer reports nine cases of osteomalacia traceable to the restricted war diet which while they presented in the main the usual symptoms showed also certain peculiar manifestations

Eosinophilia in Muscular Rheumatism.—Synwoldt found marked eosinophilia (up to 18 and 22 per cent of eosinophils) in 79 per cent of thirty cases of acute muscular rheumatism She thinks this has diagnostic importance

Grave Hemorrhage of the Lung Following Diagnostic Puncture—Flesch-Thebesius reports a case in which surgical puncture of the lung in a youth of 15 caused a hemorrhage

into an empyema cavity, which was not discovered at once and thus threatened the life of the patient

Therapeutische Halbmonatshefte, Berlin

Feb. 1, 1920, 34, No. 3

*Febrile Abortion. A. Heyn.—p. 65
*Multiple Sclerosis. G. Steiner.—p. 68
*Rumination in Infants. A. Ylppo.—p. 76

Febrile Abortion.—Heyn reports from the Charité at Berlin a mortality of only 2.4 per cent. of the 410 cases of febrile abortion treated by active intervention, out of the total 578 febrile abortions. Almost 85 per cent. had return of normal temperature the same or the next day, 3.4 per cent. had fever for more than six days. After the middle of the fourth month instruments are never used to clear out the uterus. Cautious and skilful dilatation of the cervix with laminaria first, for twenty-four hours, is the main thing.

Multiple Sclerosis.—Steiner has succeeded in inducing a paralytic disease in rabbits and guinea-pigs by inoculating them with fluid and blood from recent cases of multiple sclerosis, and a spirochete was found in their tissues. A monkey inoculated at the same time developed paralysis eighteen months later, and the brain showed changes analogous in almost every respect to those found in multiple sclerosis in man. Stemerling has also beheld living spirochetes in the brain two hours after death from multiple sclerosis. These facts justify tentative treatment with spirocheticidal drugs, Steiner asserts, but the results to date have been conflicting.

Rumination in Infants.—Ylppo has found that infants are not so likely to swallow air when they are fed lying prone, the head raised or turned on the side. The change to reclining on the abdomen is sometimes enough to break up a rebellious habit of rumination. If not, he has the child lie on a flat hammock, stretched from headboard to footboard of the crib. The unsteadiness the movements of the hammock supplement the change to the prone position so that the child's attention is diverted, and it forgets its ruminating habit.

Feb. 15, 1920, 34, No. 4

*General Principles of Organotherapy. L. Borchardt.—p. 97
Treatment of Mental Disease. Raecke.—p. 101. To be continued
*Dangers from Removing Bullet in Tissues. H. Curschmann.—p. 108
*Splenectomy in Pernicious Anemia. W. Charlton.—p. 111

The Principles of Organotherapy.—Borchardt recalls that some of the active substances isolated from certain organs display an action which has nothing to do with the original function of the organ and warns that we must not overestimate the reciprocal or antagonistic action between different organ extracts. He cites as important Langley and Elliot's assertion that epinephrin in all its actions on any organ behaves the same as electric stimulation of the afferent sympathetic fibers of that organ. Suprarenal and certain other extracts seem to activate the protoplasm and thus increase the functional capacity like parenteral protein therapy. If the organ extracts contain any protein, there is a superposed protein therapy effect. Both suprarenal and pituitary extract increase the immune reactions. In typhoid the former has increased the agglutinins from 1:20 to 1:5,120 or even 1:10,240 and pituitary up to 1:2,560. There is much to sustain the assumption that the hemostatic action of organ preparations is due to this promoting of the functional capacity. This is probably also the explanation of the benefit from transfusion of blood. The blood is destroyed, and at most its elements are used in the production of new blood. The promptly favorable effect is probably merely from stimulation of the functional capacity of the blood-producing system. Bone marrow and spleen extract may yield as favorable results in the line of regeneration of the blood as transfusion of blood itself. Pituitary treatment of typhoid, tuberculosis, cholera, etc., has been tried on this theoretical function-promoting basis, and with promising results in some circumstances. We have thus at our command a substituting hormone therapy, as in thyroid treatment of myxedema, a symptomatic hormone therapy, as in thyroid treatment of obesity, a ferment therapy, as in supplying the finished pepsin or a hormone which stimulates some special secretion, a hormone therapy seeking to utilize the reciprocal and antagonistic action of the endocrine glands, and, finally, we have the protoplasma activation therapy as in parenteral protein therapy. Hitherto, he adds, the application of these principles has been mostly empiric.

Danger of Extracting Bullet.—Curschmann reports a case of lead nephritis developing fifteen months after a bullet had entered the hip joint. The bullet was then removed but lead encephalitis followed the operation the second day, with fatal convulsions. He ascribes this to the particles of lead which had been absorbed into the tissues around, and had become mobilized by the operation when they had been in a way encapsulated before. The immediate increase in basophil granular erythrocytes in the blood testified to the intense aggravation of the lead poisoning. How to prevent this is a question. Leaving the wound open and promoting in every way the outward flow of lead-containing secretions will help. It is possible that by local infiltration of the tissues with some chemical the lead might become transformed into an insoluble compound. Straub has suggested infiltration of the field of operation with sodium sulphate or the bicarbonate which might have the effect of sweeping the lead albuminate in the region into the kidneys, and thus get it eliminated before it had a chance to reach the central nervous system. This is analogous to the action of potassium iodid. Experimental research with a deposit of lead in the tissues has confirmed the acceleration of the resorption and elimination of the lead under internal treatment with potassium iodid. No chemical is known yet which will transform and hold the lead at the spot but search should be made for such.

Splenectomy in Pernicious Anemia.—In Charlton's case the pernicious anemia retrogressed after splenectomy on the woman of 32, but her pulmonary tuberculosis did not seem to be modified by the improvement in the blood picture.

Wiener klinische Wochenschrift, Vienna

Jan. 29, 1920, 33, No. 5

Nerve and Muscle Symptoms in Arthritis Deformans. M. Jungdahl.—p. 97
*Treatment of Scabies. M. Oppenheim.—p. 102. Idem. F. Schonbauer.—p. 106
*Treatment of Gonorrhea by Hot Baths. Kapferer.—p. 107. E. Hoke.—p. 109
Finger Ring on Root of Penis for Ten Years. Maresch.—p. 106
Suction of Manometer Fluid with Induced Pneumothorax.
*Treatment of Gonorrhea by Hot Baths. Kapferer.—p. 107. E. Hoke.—p. 109
Sarcophila Magnifica in Myiasis. J. Fiebiger.—p. 109

April 22, 1920, 33, No. 17

Epidemic of Encephalitis and Polyneuritis. Schlesinger.—p. 358
Serotherapy in Influenza. E. Foldes and A. Hajo.—p. 360
1920 Epidemic of Lethargic Encephalitis. Economo.—p. 361. Con.
Conclusion
Concrete As a Conductor of Electricity. S. Jellinek.—p. 364

Treatment of Scabies.—Oppenheim reports that in the treatment of over 20,000 recent cases of scabies in the Wilhelmine Hospital his modification of the Hardy treatment effected an entirely harmless and absolutely certain cure. The whole treatment is completed within a period of three hours as compared with a week or more by older methods. He describes the method in detail and recommends that stations for the purpose be organized throughout the country.

Treatment of Gonorrhea by Hot Baths.—Kapferer found the Weisz method of treatment very weakening to the patients some of whom were obliged to discontinue it. The results are very uncertain, and it requires the constant presence of physician and nurse. The aim is to kill the gonococci by heating the body to 40 C. (104 F.) or more and keep it at this point. The temperature of the deep bath is raised within fifteen minutes from 38 to 43 or even to 45 or 46 C. (114.8 F.)

Zentralblatt fur Chirurgie, Leipzig

May 1, 1920, 47, No. 18

Atony of Stomach with Arteriomesenteric Ileus. H. Nieden.—p. 418
Infolding Suture in Gastro Intestinal Surgery. Pribram.—p. 422
Advantages of Nonhydrophil Gauze Propping.—p. 424
*Cello String for Thread Saw in Stenosis of Esophagus. G. Kelling.—p. 425

Wire-Covered Gut String as Thread-Saw—Kelling, having found it difficult in using a thread-saw for cutting an esophageal stricture to get the thread past the stenosis and to find the end again quickly through the gastrostomy opening decided to use a wire-covered gut string such as is used on a cello, and has found it very satisfactory, chiefly because it does not kink so readily

Zentralblatt fur Gynakologie, Leipzig

May 1 1920 **44** No 18

*Kidney Disease in Relation to Pregnancy T Heynemann—p 449
Criticism of Twilight Sleep R T von Jaschke—p 459
Appendicitis with Adnexa Involvement Hartog—p 461
*Conservative Operation in Chronic Pyosalpinx F R Brewitt—p 462
Injury of Sigmoid Flexure in Induced Abortion Schluter—p 464

Kidney Disease in Relation to Pregnancy—Heynemann explains that while a typical pregnancy glomerular nephrosis is not likely to develop into chronic nephritis yet an acute exacerbation during a pregnancy, of a previously existing glomerular nephritis may become chronic In ordinary cases of pregnancy glomerular nephrosis so long as there is no tendency to eclampsia interruption of the pregnancy will very rarely be indicated but with acute and chronic glomerular nephritis interruption of the pregnancy must always be considered In acute glomerular nephritis, if the blood content of the urine increases in spite of treatment or if it keeps at a high level, interruption of the pregnancy is imperative

Conservative Operation in Chronic Pyosalpinx—In the treatment of pyosalpinx Brewitt has used turpentine injections in twelve cases and reports remarkable success After a Pfannenstiel incision the patient is placed in the Trendelenburg position The intestines are walled off to expose the pelvis and with a large cannula the tubal sacs are punctured and the pus or serous fluid is aspirated The cannula is left in the opening and a 10 per cent solution of oil of turpentine (slightly less than the amount of fluid aspirated) is injected The site of puncture is sutured with fine catgut Then 4 or 5 c c of the solution are carefully injected into the passage of the tube from each end to block the infection from spreading If any loops of the small intestine or the sigmoid are adherent to the pelvic organs the adhesions are broken up Then the omentum is brought down and is spread out like a mantle so that it extends deep down into the Douglas pouch, and is sutured to the posterior pelvic wall thus completely roofing over the pelvis There was no postoperative fever, and prompt recovery followed After-treatment consisted of warm sitz baths In ten of the twelve cases so treated gonorrheal infection was present

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

April 10 1920 **1**, No 15

*Porphyrinuria with Colics I Snapper—p 1233
Excentric Fixation for Strabismus G ten Doesschate—p 1250
Danish State Sickness Insurance H H van Eyk—p 1256
Case of Lethargic Encephalitis C D Cramer—p 1266
Abscess in Left Brain with Right Otitis Media Klessens—p 1269

Porphyrinuria with Colics—Snapper describes three cases of porphyrinuria accompanied with abdominal pains at the times when the excretion of porphyrin was most pronounced The patients were a girl of 17, a woman of 24 and a man of 33 In each case in time the inevitable paralysis developed, of both the cerebral and spinal type and proved speedily fatal Necropsy failed to reveal any characteristic changes A tuberculous apical process and congenital malformation of one kidney in the young girl seemed to be incidental Between attacks of colic the patients felt entirely well until the terminal paralysis The pains and the abnormal functioning of the liver cells responsible for the porphyrin production and also the hemorrhagic erosions in the stomach responsible for the occult hemorrhages might be explained by a pathologic condition of the retroperitoneal plexus spreading finally to involve the whole peripheral nervous system Chronic lead poisoning can produce a similar picture with porphyrinuria colics and recurring gastric ulcer, and endogenous intoxication might be considered Attempts to induce similar symptoms in rabbits with sulphonal poisoning were only partially successful A normal tint of the urine does not exclude porphyrinuria, as a tuberculous alcoholic aged 29, presented a strongly positive porphyrin spectrum though the urine was but slightly darker At necropsy the tuberculous process was found to be close to spleen stomach and liver, thus possibly affecting the retroperitoneal plexus, which supports Snapper's theory stated above

Acta Medica Scandinavica, Stockholm

June 9 1920 **53** No 4

*Fat Content of Blood and Liver in Diabetic Coma H C Geelmuyden—p 381
Kinetics of Ketonic Decomposition of Aceto Acetic Acid E M P Widmark—p 393 In English
Bacteriology and Epidemiology of Influenza O Thomsen and M Kristensen—p 422 In French
Central Mechanism for Movements of the Eyes H Gertz—p 445 In French
Duration of Systole in Electrocardiogram L S Fridericia—p 469 In German

Fat Content of Blood and Liver in Diabetic Coma—Geelmuyden tabulates the necropsy findings in ten diabetics and in four nondiabetics in regard to the weight of the liver and its content in glycogen and fat and the fat content of the blood They confirm the old assumption that the glycogen content of the liver may be high in diabetics The amounts ranged from traces up to 44 7 per cent in the cases with the highest acidosis This is a larger proportion than is found in the liver of dogs with pancreas and phlorizin-starvation diabetes The fat content does not parallel the glycogen content as a rule but the livers with high percentage of glycogen had also large proportions of fat On the other hand the blood showed a much higher proportion of fat than is found in experimental diabetes In the latter the liver contains much fat and little glycogen while the reverse prevails in human diabetes He ascribes this to the more gradual onset of the human diabetes (In German)

Hospitalstidende, Copenhagen

March 31 1920 **63** No 13

The Pigment in Human Skin A Kimeyer—p 193 Concluded in No 14 p 209

April 7 1920 **63**, No 14

*Coagulation of the Blood in the Insane E J Larsen and H Lind—p 220

Coagulation of the Blood in the Insane—Larsen and Lind tested the coagulation time in thirty-nine healthy controls and in fifty insane patients with various forms of mental disease and found them all within normal range

April 14 1920 **63** No 15

*Extreme Deformity from Rachitis T Fiken and J Fabricius Møller—p 225

Case of Monstrous Rachitis—Eiken and Møller here report the necropsy findings at the age of 38 in a case of extreme deformity and dwarfing from rachitis The head alone seemed to be normal and the man was known as a Shakespeare scholar The total height was 87 cm and the weight 20 kg of which the heart formed 1 1 per cent The bone findings had nothing in common with osteomalacia.

Hygiea, Stockholm

May 16 1920 **82** No 9

Occurrence of Parameningococci L Cronqvist—p 289
*Complications of Fracture of the Humerus W Forssell—p 300

Complications of Fracture of the Humerus—Although usually harmless supracondylar fracture of the humerus, especially in children is liable to entail extremely severe complications if the brachial artery gets pierced or compressed by the fragments of bone or the median nerve is compressed Kocher has published two cases and Forssell here adds two more to the few cases of the kind on record The great danger is that the injury of the artery will be overlooked as there often is no [illegible] being obliterated by the pressure [illegible] develop owing to the press[illegible]

secretions In Forssell's two cases, the arm had been put in a plaster cast, the injury of the artery not having been suspected, but the tendency to gangrene was arrested in time, by operative opening up the seat of the fracture to correct conditions In one of Kocher s cases the child's arm had to be amputated

May 31, 1920 82 No 10

*Suprarenal Tumor with Hypertrophy of Heart H Bergstrand —p 321

Suprarenal Cytoma—The pheocytoma of the right suprarenal gland was accompanied by hypertrophy of the myocardium of the left half of the heart Bergstrand accepts this by exclusion as probably the result of chronic excessive suprarenal functioning under the stimulus of the tumor

Norsk Magazin for Lægevidenskaben, Christiania

June 1920 81, No 6

Lethargic Encephalitis F Harbitz —p 529
*Spontaneous Subarachnoid Hemorrhage J Blom —p 551
*Labor Induced with Internal Measures G Benestad —p 563
*Primary Sarcoma of Lung K Wildhagen —p 567
Aneurysm of Main Trunk of Pulmonary Artery K Wildhagen —p 572
*Migration of Fat H C Geelmuyden —p 578

Spontaneous Subarachnoid Hemorrhage—In one of Blom's two cases the sudden onset of weakness the knees giving way, the intense headache chills and vomiting Kernig sign, bradycardia and stiff neck were explained by the blood in the lumbar puncture fluid Great relief followed the punctures, but no micro-organisms could be found in the fluid One case was mistaken for lethargic encephalitis the other for epidemic meningitis Both the meningitic and the comatous form can terminate in recovery or progress to a fatal ending In a recent compilation of thirty-one cases all ages are represented from a hemophiliac boy of 7 to five subjects between 60 and 80 Petren advises against lumbar puncture, as this might bring on the hemorrhage anew, but Blom comments on its brilliant success as a palliative Petren enforces complete physical and mental repose with ice to the spine

Medical Internal Measures to Induce Delivery—Benestad reaffirms that dietetic measures, plus quinin and pituitary treatment or other internal measures may induce expulsion of the contents of the uterus if the pregnancy is at term or beyond, but not in the course of a normal pregnancy In a case reported in an elderly primipara the fetus had died at the twenty-ninth week, and three weeks later, under castor oil quinin and enemas, labor was induced, although there was no indication of it to start with

Production of Sugar from Fat—Geelmuyden presents evidence to show the connection between the lack of glycogen in the liver and the syndrome migration of fat and ketonuria The latter seems to be a sign that the glycogen content of the liver is very low Only diabetes mellitus in man seems to be an exception to this rule probably because in the course of time the organism adapts itself to the altered metabolism, the ability of the liver to produce sugar from fat increasing as its ability to retain glycogen diminishes The lack of glycogen in the liver starts the migration of fat in order to supply fat for the liver to transform into sugar The assumption that the hyperglycemia and the glycosuria in diabetes are due to an overproduction of sugar from albumin and fat offers a plausible explanation for all the phenomena in diabetes This assumption is much more plausible and instructive than the opposite theory, namely, that diabetes is the result of a lesser combustion of sugar in the organism as the cause of the glycosuria The primary cause of the overproduction of sugar may perhaps be sought, not in the metabolism as such but in the nervous system or the endocrine system Geelmuyden s long article discusses both sides of the question, especially the light thrown on it by the findings in phosphorus poisoning in which there is migration of fat and ketonuria, but the glycogen disappears rapidly from the liver and the sugar from the blood With tardy chloroform fatalities there is fatty degeneration of organs, and with chloroform anesthesia there may be glycosuria and ketonuria and this ketonuria like that in pregnancy and in phosphorus poisoning is independent of the intake of carbohydrates

Ugeskrift for Læger, Copenhagen

May 27 1920 82, No 22

*Otogenous Multiple Intracranial Disease H Mygind —p 687 Concluded in No 23 p 720
*Sun Glasses H Larsen —p 700

Otogenous Intracranial Diseases—Mygind analyzes 207 cases at the ear and throat clinic, including 35 per cent in which there were multiple intracranial complications This material is studied from various standpoints, and also the indications for operative measures The aim should be, he says, to enter the skull along the track of the infection or the most likely path He insists on the necessity in every case of opening up the perpendicular part of the sigmoid sinus to examine it thoroughly throughout This sinus is involved far more often than would be supposed from the symptoms while this form of craniotomy is comparatively harmless In fact he reiterates every craniotomy that leaves the dura intact is harmless Abnormal conditions in the temporal bone and vessels favor transmission of the infectious process This explains the sudden and unexpected development of intracranial processes in the absence of retention of pus or other conditions usually responsible for the spread of infectious processes The intracranial complication is a consequence which our prophylactic measures—operative or otherwise—may not be able to avert, owing to individual anatomic conditions

Sun Glasses—Larsen reports the results of extensive research on different kinds of glass to determine which is the most effectual in keeping out the short-waved chemical rays that induce conjunctivitis etc while interfering least with vision His decision is for yellow glass No 23 (Nitsche and Gunther scale) This absorbs 25 per cent of the 580 wave rays 50 per cent of the 520 rays and 85 per cent of the 460 rays This yellow tint is comfortable for the eyes and impedes vision very little He adds that the macula is protected with yellow pigment in the retina, another physiologic argument in favor of yellow glass

June 3 1920 82 No 23

*Differential Leukocyte Count E Meulengracht —p 715
*Blood Platelet Count H C Gram —p 718
*Determination of Coagulation Time H C Gram —p 720

Differential Leukocyte Count.—Meulengracht describes the physical and other reasons on which he bases his advice to use a cover glass instead of a slide in making the count of the leukocytes

Blood Platelet Count.—Gram has modified the Thomsen method in a way to bring this reliable technic for enumeration of the platelets within the reach of every practitioner A 3 per cent solution of sodium citrate is poured in a Sahli glass to the mark 10, and then with a not too narrow, curved needle venous blood is run down into the citrate solution to the 100 mark After shaking and setting aside for an hour, a small quantity of the citrated plasma is drawn off with an ordinary leukocyte pipet and diluted in the proportion of 1 20 with physiologic sodium chlorid solution and a few drops liquor formaldehydi per 100 c c Counting the platelets in five large squares in the Thoma Zeiss counting chamber after waiting half an hour, gives the number of thousands of platelets per cubic millimeter of the citrated plasma The number of platelets in the blood can be computed from this figure by multiplying with one of the constants in a short table which he gives The constants range from 0 59 with 110 hemoglobin percentage, to 0 63 with 100, 0 68 with 90, 0 73 with 80 0 78 with 70, 0 82 with 60, 0 87 with 50, 0 92 with 40 0 97 with 30, and 1 01 with 20 to 1 04 with 15 per cent hemoglobin He refers to his recent article in the *Archives of Internal Medicine* March, 1920 which explains the importance of the platelet count in the diagnosis and prognosis of various diseases

Coagulation Time with Citrated Plasma—Gram describes his modification of Howell's method, and adds that it will be given with fuller details in an article soon to appear in the Johns Hopkins Hospital *Bulletin*

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SURGERY OF CANCER OF THE LARGE INTESTINE *

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During the last twenty years a great deal of work has been done in the treatment of carcinoma of the large intestine Many men have attacked this problem, and a great many different operative plans have been introduced and tried out I have been much interested in the problem during this period and have run the gamut of the various plans that have been presented From our experience I think we have been able gradually to crystallize some general principles that are essential in the handling of these cases, and I shall briefly and informally present the conclusions I have arrived at as a result of the work I have done in my own clinic

DIAGNOSIS

Before considering the surgical therapy, I would like to make a short statement in regard to the diagnosis of carcinoma of the colon, simply emphasizing the great importance of careful roentgen-ray study of these cases The roentgen ray is not infallible in the diagnosis of cancer of the colon, but it has been developed to a point at which it is certainly the most valuable single piece of evidence that we can obtain in these cases I would not belittle the great value of a carefully obtained clinical history and physical examination of the patient, because these are essential, and are often the basis of determination, but in the absence of a palpable tumor the roentgen ray is absolutely essential to determine by the presence of a filling defect the location of the neoplasm, and it is of great importance in the subsequent management of the case, in determining the shape and location of the abdominal incision In the overwhelming majority of the cases careful roentgen-ray examination, fluoroscopic and plate, gives definite and absolute evidence of the existence and location of the carcinoma of the colon I find, however, that there are some exceptions to the rule In some cases of carcinoma, at the hepatic and splenic flexures the overlapping of the shadows of the barium in the bowel make it impossible in the plate to see any filling defect, and even in fluoroscopic examination it may be difficult to demonstrate any abnormality Cases of this kind, however, are certainly the exception and not the rule In the presence of obstructive symptoms it is frequently not desirable or possible to obtain a roentgen-ray examination before operative interference is undertaken, and here, of course the diagnosis must be based on the history and clinical picture

SURGICAL THERAPY

As my experience has grown in these cases, I have been convinced of the great value of preliminary colostomy in the presence of obstruction In the absence of definite evidence as to the location of the obstruction and in cases that come to us greatly distended, we have adopted the general plan of making an oblique muscle-splitting incision on the right side and either a colostomy using the cecum, or if the cecum itself is involved, an ileostomy, to relieve temporarily the obstruction The plan that we have adopted is a very simple one and the operation is usually done under local anesthesia (Fig 1), a muscle-splitting incision, such as that employed in an appendix operation, the pulling into view of the cecum or ascending colon or ileum, passing a single suture through the skin and superficial fascia, muscles of the abdomen, and peritoneum using a noncutting needle, then transfixing the mesentery of the bowel close to the bowel itself, then bringing the suture out through the opposite side of the incision and fastening the two ends of the suture to a large sized bone or porcelain button, about an inch in diameter, then closing the balance of the skin incision with black silk suture and making no effort whatever at suturing the peritoneum to the bowel, and covering the entire field with a thick, sterile zinc oxid paste We then introduce into the proximal loop through a small puncture a No 12 or 14 American scale catheter, which is held in position by two purse-string sutures of Pagenstecher linen This we regard as a point in the technic of great service, as it secures at once a relief of the gas tension, making the patient much more comfortable If the small catheter becomes obstructed, it is readily washed out with a little physiologic sodium chlorid solution or sterile olive oil The colostomy is completed at the end of about three days by taking an electric cautery and enlarging the puncture opening, which has been used to introduce the catheter, to the desired extent, usually about one-half or three-fourths inch

Too great emphasis cannot be put on the life-saving value of colostomy or ileostomy in the presence of obstructive symptoms in these cases of carcinoma of the colon After the obstructive symptoms have been relieved by the preliminary colostomy, or in the cases of cancer of the colon in which no obstructive symptoms have as yet developed it is essential for us by roentgen-ray examination to determine the presence of the cancer, if one exists and to determine its exact location

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

THREE BASIC PRINCIPLES

In the technic of removing carcinoma I have learned from experience the importance of three basic principles

1 All of these cases can be best handled through four different incisions, namely, a muscle-splitting

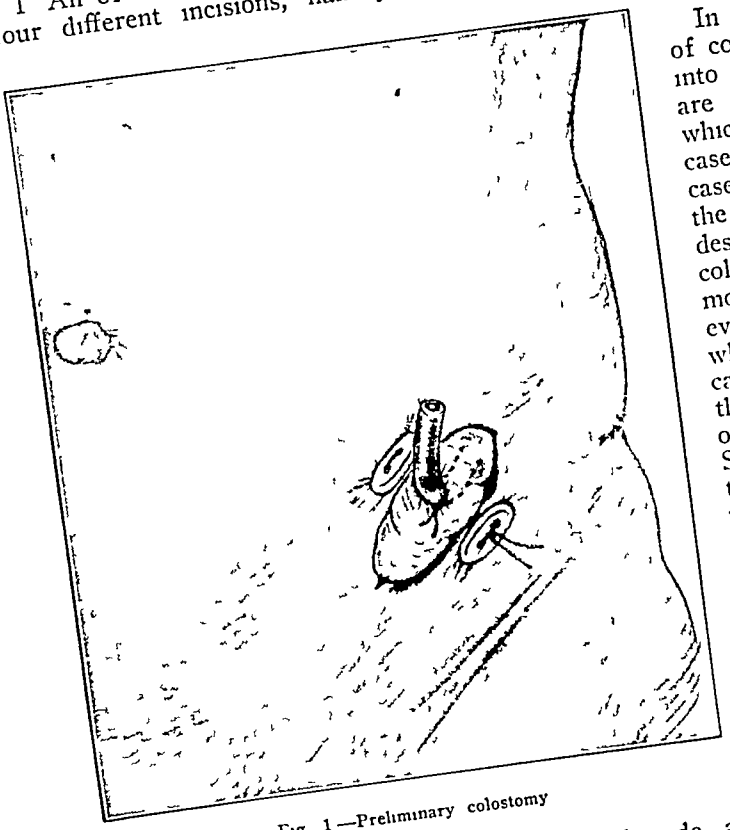

Fig 1—Preliminary colostomy

incision like an appendix incision on the right side, a similar one on the left, a large S-shaped incision on the right side, and a similar one on the left (Fig 2) We now seldom use the midline incision, although in carcinoma of the transverse colon close to the center of that section of the bowel, a midline incision above the umbilicus is, of course, indicated

2 It is essential in the removal of any portion of the large intestine from the cecum to the rectosigmoid to mobilize very fully that section of the bowel which is involved in the process and in the operative procedure For instance, it is possible by dividing the outer layer of the mesocolon from the cecum to the rectosigmoid to mobilize the entire large bowel and bring it out of the abdominal incision In the practical application of this principle to a given case it is necessary, of course, simply to mobilize the bowel for a sufficient length to enable us to resect the cancer and to secure a good anastomosis without any tension (Fig 3)

3 The third basic principle which we have learned to recognize is the importance of a side-to-side anastomosis in big bowel surgery We are thoroughly converted to the view that, after mobilizing the colon widely and resecting the carcinoma, doing this, of course, with a large margin of safety as far as the extent of the excision is concerned, the proper technic is to close both ends of the intestine by crushing, ligating and invaginating with Pagenstecher linen, and then making a side-to-side anastomosis as we do in gastro-enterostomy (Fig 4) The mortality, as I obtain the evidence from my own clinic and from the literature, is about one-half as great in properly performed side-to-side anastomoses as in properly performed end-to-end anastomoses of the large bowel, and because of that fact end-to-end anastomoses should be practically discarded

TWO GROUPS OF CASES

In the practical handling of these cases we should, of course, divide these cancers of the large intestine into two distinct groups first, those in which there are no obstructive symptoms, and second, those in which obstructive symptoms already exist In those cases in which there are no obstructive symptoms, the case can be cleaned up in one operation by following the general principles of technic which I have just described in carcinoma of the cecum or ascending colon, an oblique incision on the right side, with free mobilization of the colon up to the hepatic flexure, or even including the hepatic flexure if this is necessary, which is quite possible by our muscle-splitting incision carried well backward in the flank In carcinoma of the hepatic flexure or upper part of the ascending colon or right portion of the transverse colon we employ our S-shaped incision on the right side, in carcinoma of the central portion of the transverse colon, a midline incision above the umbilicus, in carcinoma of the splenic flexure or in mobilization of the splenic flexure,

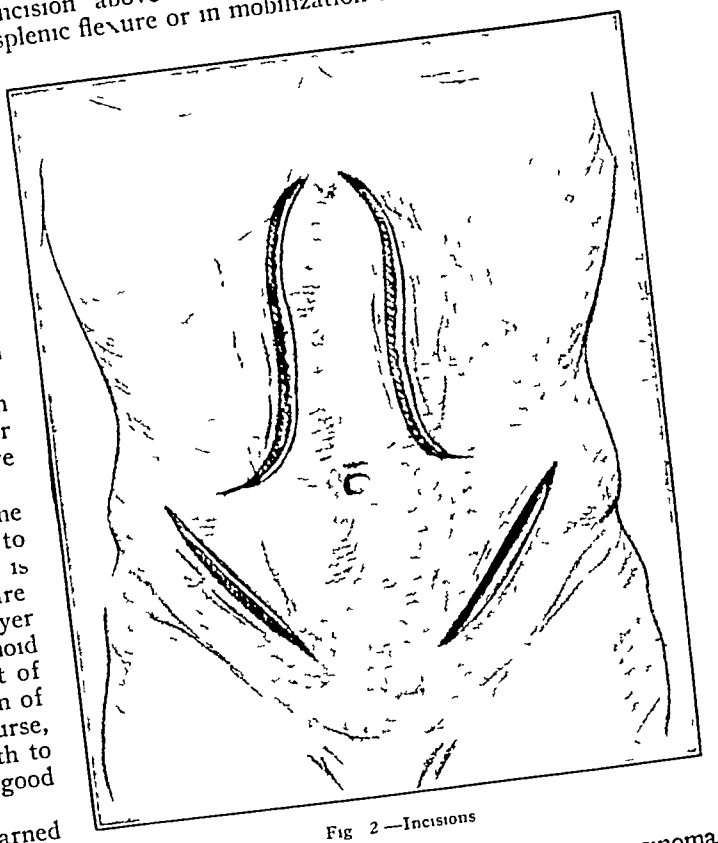

Fig 2—Incisions

a large S-shaped incision on the left side, in carcinoma of the descending colon or sigmoid a large muscle-splitting incision on the left side

Immediate closure in these cases should be made, with drainage well down through the peritoneum to the site of the anastomosis, with a small cigaret drain, which is to be left in place from twenty-four to forty-eight hours

The cases of cancer of the colon that come to us with obstructive symptoms present a more difficult and complicated picture If we have definite knowledge of the location of the carcinoma we can plan the colostomy, which is essential as a preliminary step, to the best advantage, for instance, if we know that the sig-

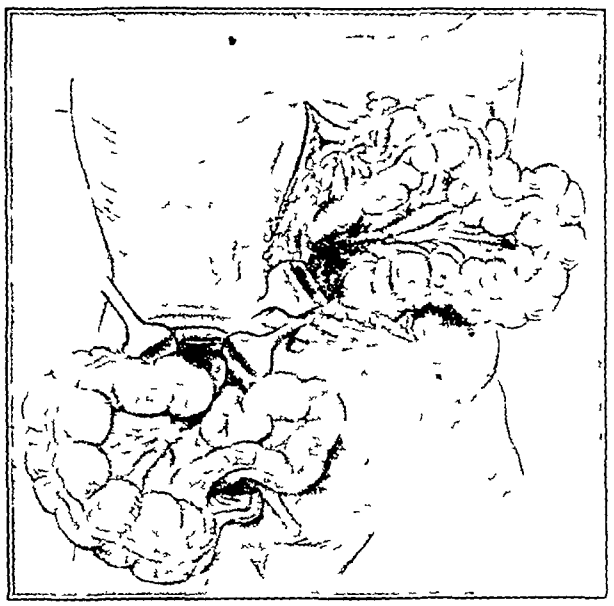

Fig 3 —Mobilization of bowel

moid is involved, we can employ the sigmoid or descending colon for our colostomy opening, if the colostomy is to be permanent If, however, it is but temporary, a colostomy in the cecum is preferable, as it leaves us a free, clean field for the resection When, however, there is any doubt as to the location, as I have just stated, we should make it a rule to make a *right sided muscle-splitting incision and employ the* cecum, ascending colon or the ileum When the condition of the patient warrants, at the same time that the colostomy is made the hand should be introduced into the peritoneal cavity and a thorough exploration made to determine the exact location of the primary lesion and the question of metastases or radical lymphatic involvement In some cases, however, when the condition of the patient is bad and the operation is performed under a local anesthetic, this general exploration of the abdominal cavity may be difficult or inadvisable If the patient recovers from the obstructive symptoms after the colostomy is made, then a careful fluoroscopic study of the colon is later undertaken, and, if the condition warrants, later a radical resection is to be undertaken

THREE-STEP OPERATION VERSUS THE MIKULICZ OPERATION

You will notice that I have not mentioned the Mikulicz operation as yet in this discussion Many surgeons in handling cases of cancer of the colon employ the Mikulicz operation in a large percentage of their operations I want to submit a plan we have adopted in our clinic which I believe is of much greater service than the Mikulicz operation This is what we call the three-step operation I can best describe it by giving the history of some of the typical cases in which we have employed this method

CASE 1—A year ago a woman, aged 40, was brought into our clinic with obstructive symptoms of a moderately severe degree She was quite distended, although her general condition was fairly good Fortunately, Dr Ralph Brown had obtained a fluoroscopic examination and some roentgenograms of the case before the obstructive symptoms developed, and these revealed a filling defect about the middle of the sigmoid Because of the obstructive symptoms I first made a muscle-splitting incision on the right side brought up the cecum with our button suture and performed the colostomy which I have described Within four weeks she was in very good condition, the artificial anus functioning very satisfactorily, and she was in a condition to stand the radical operation of resection I then made a muscle-splitting incision on the left side resected the carcinoma, which was located at about the center of the sigmoid and made a side-to-side anastomosis She made an excellent recovery from this operation Four weeks later, under a local anesthetic, I closed the colostomy opening on the right side The patient is now in excellent condition, has regained her former weight, and has made a perfect recovery She has on her abdomen two oblique incisions like appendix incisions, one on the right and one on the left side, perfectly clean fine scars without any tendency to hernia or bulging, and she is, in fact, quite normal in every way

CASE 2—A man aged 65 was brought into my clinic the extreme picture of obstruction We had absolutely nothing to guide us as to the location and cause of the obstruction Under local anesthesia I made a right-sided muscle-splitting incision, found the enormously dilated cecum and made a colostomy with our button suture method, with immediate relief by introducing a catheter into the caliber of the intestine *The man was in such a serious condition that it took* six or seven weeks for him to recover sufficiently to warrant the radical operation In the meantime careful examination revealed a small circular carcinoma at the splenic flexure

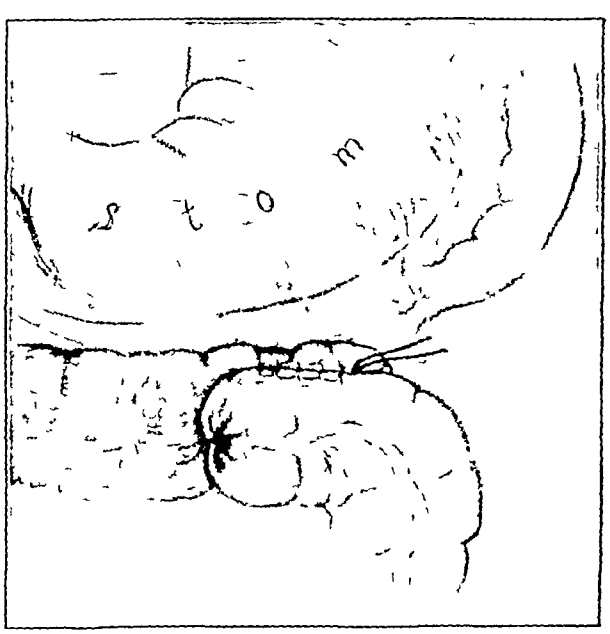

Fig 4—Lateral anastomoses of colon at splenic flexure.

The second step in the procedure was an S-shaped incision on the left side free mobilization of the splenic flexure and the transverse and descending colon and resection of the carcinoma and side-to side anastomosis Four weeks after the resection of the cancer the third step of the operation was performed and under local anesthesia the colostomy was closed He now has a perfectly clean scar like an appendix scar on the right side, and a perfectly clean S-shaped incision scar on the left side.

This three-step operation in the presence of obstruction to my mind is very much more satisfactory than the Mikulicz operation It is, I believe, a safer procedure and one that is in no way blind It secures immediate relief from the obstruction, it enables us to make a much more radical operation of resection of the carcinoma than does the Mikulicz, and it is much more satisfactory to the patient than the Mikulicz plan

Carcinomas from the cecum to the lower part of the sigmoid, which can be handled after the method I have outlined and which are limited to the primary focus, give an excellent prognosis of permanent cure if early recognized and radically removed Carcinomas of the rectosigmoid form a peculiar, unfavorable group both from the standpoint of the practical management of the operative technic and from the standpoint of ultimate prognosis I have here run the gamut of the various methods that have been advocated I am now in a position to present my views without having any longer much question as to the best plan of procedure My views are these that in carcinoma of the rectosigmoid a wide mobilization through the abdomen should be undertaken, the carcinoma removed, a left inguinal colostomy made, when feasible the rectum invaginated and excluded from the peritoneal cavity by purse-string sutures, and when advisable, of course, from the extent of the involvement, removal of the entire rectum One must use good judgment in determining this matter There is nothing to be gained by the removal of the lower 4 or 5 inches of the rectum which is in no way involved If the carcinoma of the rectosigmoid is limited and can be completely removed, the lower portion of the rectum should be allowed to remain

In carcinomas of the rectum itself we are employing with great satisfaction, if the carcinoma does not extend up into the bowel more than 3 or 4 inches and is not too extensive, a method of splitting the rectum posteriorly after removal of the coccyx, bringing the entire operative field will into view and in just the same control as one might an epithelioma of the lower lip, then cutting out the lesion with the electric cautery, saving as much of the rectum as is absolutely free of disease, closing with catgut suture the raw surface from which the carcinoma has been dissected, packing with iodoform gauze, and obtaining, as we must necessarily in these cases, wound healing by granulation We have been gratified to find what good control the patients have secured after very extensive local operations for carcinoma of the lower 3 inches of the rectum These operations are, of course, of the atypical type We have a number of patients who have been operated on two, three, four and five years ago and who report to us regularly that they are free from recurrence and that they have very satisfactory control

Finally, there is a limited group of cases in which the rectum is so extensively involved that the best procedure seems to be a Kraske operation, with complete removal of the rectum and the making of a sacral anus We have learned, as other surgeons have learned, not to force the Kraske operation to cover too extensive a field and to attempt to remove not only the rectum but the rectosigmoid and part of the sigmoid itself by this method, because although most of the patients survive and many give very satisfactory results, there is too great a possibility of necrosis from cutting off of the blood supply when this is undertaken Such cases are preferably handled through the abdominal route

One final word from our experience, regarding the tube resections that seem so attractive on paper and have been so widely employed Our own experiences have been that although we have had some very satisfactory results, on the whole the tube resection should be discarded

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CANCER OF THE RECTUM*

G W CRILE, M D
CLEVELAND

The ideal for the surgical treatment of cancer of the rectum, as of any other pathologic condition, is maximum operability, maximum percentage of permanent cures, and the reduction of the immediate mortality to zero

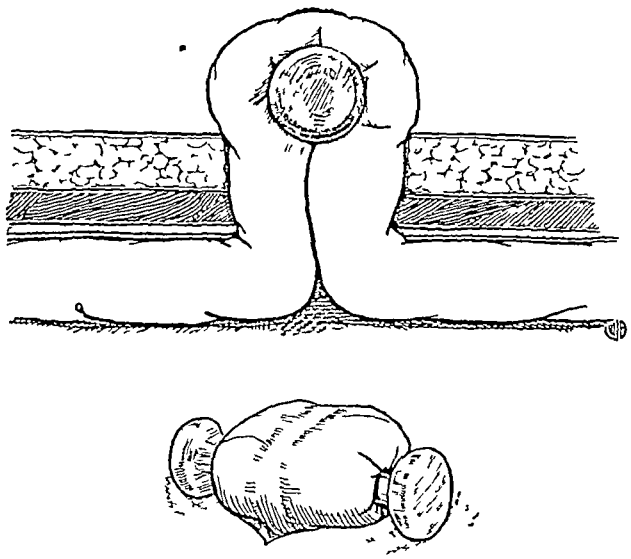

Fig 1 —Angulation of colon by short flanged glass tube

The possibility of a permanent cure of cancer of the rectum by operation depends more on the stage at which the case is presented for operation than on even the most thoroughgoing technic, but maximum operability, which means a safe operation with the removal of the maximum amount of tissue surrounding the cancer, is a possible attainment

To cancers which involve the lumbar muscles, which penetrate the bladder, which involve the liver, etc, operability does not apply Such cases are inoperable When we speak of increased operability we mean that the technic has been so improved that all but the anatomically inoperable are given the maximum chance for survival

We believe that this implies such surgical control that any method—the posterior, the combined, the abdominal—may be used with equal facility to afford the maximum chance of permanent cure

The evolution of the management of these cases has followed lines analogous to those by which the management of exophthalmic goiter cases was developed, that is, the operation is individualized—

* Read before the Section on Surgery General and Abdominal at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

the type of operation and of postoperative care follows the anatomic and pathologic indication In brief, procedures follow indications—not rules

Reports of mortality attending operations for cancer of the rectum are given in the accompanying table

RADICAL OPERATIONS FOR CANCER OF THE RECTUM

Reporter	Date of Report	Number	Mortality per Cent
I STATISTICS COLLECTED BY VARIOUS REPORTERS			
Tuttle (Table I)	To 1885	487	22 4
Tuttle (Table II)	1885-1892	512	20 0
Tuttle (Table III)	1892-1897	259	11 7
Ball	1896	175	16 5
Billroth	1896	608	53 0
Gross	1896	193	20 0
Kelsey	1896	140	15 7
MacCosh	1896	439	19 1
Veljaminoff	1896	335	20 5
Kronlein	1900	881	19 4
Hartwell (group of N Y surgeons)	1905	46	20 0
Challer and Perrin	1913	208	40 86
Hartman	1913	1 665	15 8
J M Lynch	1918	335	16 0
II INDIVIDUAL STATISTICS			
Kraske	1892	80	18 7
Poppert	1906	63	6 3
Rotter	1906	42	4 8
Cripps	1907	85	4 7
C H Mayo (Mayo Clinic)	1916	430	10 5
C H Mayo (Mayo Clinic)	1916	(1913-1915,	12 5
Bull	1919	44	11 4
G W Crile and associates	1900	72	9 7
G W Crile (personal last series)	1920	20	0 0
III TOTAL SERIES OF OPERATIONS FOR CARCINOMA OF THE RECTUM INCLUDING COLOSTOMIES FOR OBSTRUCTION			
G W Crile and associates	1900	1 8	12 5
G W Crile (personal last series)	1920	38	0 0

A critical examination of the causes of death as reported in the literature and as found in our own series showed that the principal cause was not hemorrhage or shock, but that death was generally due to infection and to the absorption of the toxins of feces A laboratory investigation showed clearly that the effects of the injection of the toxins of feces were surprisingly poisonous This fact associated with the fact that there exists a large surface for absorption in the field of operation, gave an important clue It followed that the first surgical step should be the complete diversion of the fecal stream by a preliminary colostomy This is usually performed under analgesia and local anesthesia, and causes but little depression We are satisfied that the best colostomy is of the Littlewood type, i e, an intramuscular incision below the border of the ribs The Sistrunk technic answers well also The incision for the colostomy is made large enough to ascertain whether or not there is involvement of the liver or of the lymphatic glands, as well as the extent of the local invasion Of prime importance is the management of the colostomy so that every particle of the fecal stream is diverted and none passes through the rectum This is accomplished by a sharp angulation of the colostomy, which is secured by the insertion of a short flanged glass tube under the loop of colon and on the surface of the skin (Fig 1)

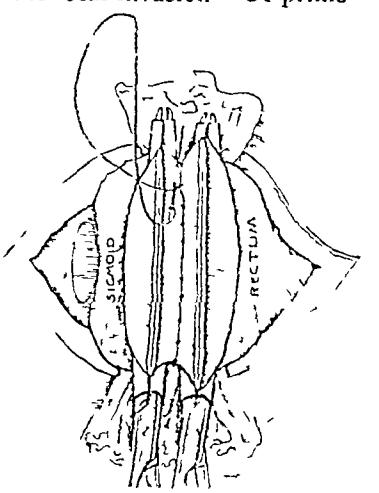

Fig 3—Technic of excision of the rectum continuous right angle stitch

At the end of a week or as soon as both the local and the general conditions warrant it, the major operation is performed (Figs 2-6) Whether the technic is intra-abdominal or posterior or the combined operation, a wide excision of the growth and of the surrounding structures is made If an end-to-end anastomosis is made, a rectal tube (Mayo) is passed through from the anus Infection of the field is at first controlled by means of packing with iodoform gauze well wrung out, but as soon as the suture line is secure, the Carrel-Dakin method is employed The wound must be kept clean at all times Because of the colostomy, nourishment need not be suspended and the bowels may move

If the operation is extensive and of a nature to presuppose the development of peritonitis, or should peritonitis unexpectedly appear, the opium-water-posture-heat method is at once inaugurated This method is all but specific

Should there be secondary anemia, a blood transfusion is made promptly without waiting to discover whether the patient is going to do well or ill As in the treatment of shock, it is a grave error to allow a patient to remain in a state of low blood pressure in the hope that he will improve through his own resources, reserving a blood transfusion to be used as a last resort after it has become apparent that the patient is going to die

Should healing be retarded, a blood transfusion is made

Whatever his condition, the patient is given the benefit of a dietetic and hygienic regimen identical with that for tuberculosis—forced feeding and fresh air in abundance

When the intestinal healing is complete and not until then, the temporary colostomy is closed by a plastic operation and the sigmoid loop dropped back into place

Our confidence in the value of these procedures is based on a comparative study of seventy-two opera-

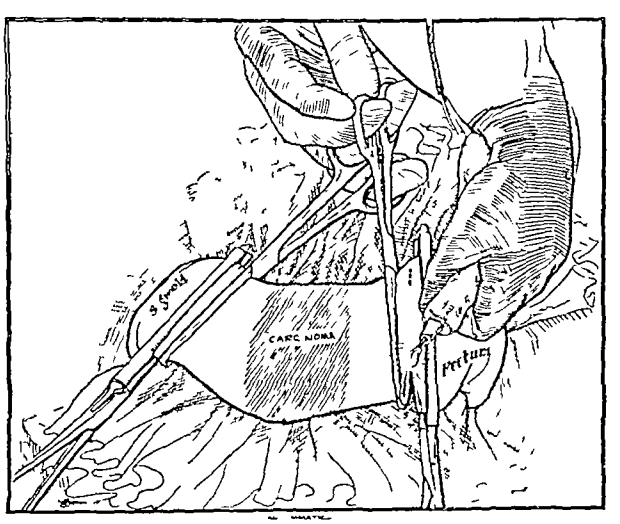

Fig 2—Technic of excision of cancer of the rectum excision of carcinoma

tions for cancer of the rectum performed by my associates and myself with a mortality rate of 9 7 per cent

My series, since the foregoing plan has been followed, consists of thirty-eight operations, twenty of which have been radical with no death

The end-results of this series will be reported in a later communication

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS BEVAN AND CRILE

DR DANIEL F JONES, Boston Dr Bevan brought out points which will help to lower the mortality from carcinoma of the colon There are two principal reasons for the great improvement in our statistics first, the mobilization of the colon, for which, I believe, Dr Mayo is responsible, and, second, providing a safety valve which Dr Bevan does by a colostomy or a cecostomy There are several other methods of obtaining relief from gas above the line of sutures, one is an enterostomy by the Witzel method, as suggested by Dr Charles Mayo, another is by putting a tube through the anastomosis from the anus No improvement has been made in the great majority of surgical conditions, except through the cooperation of the general practitioner We talk much about the improved technic of operations for acute appendicitis as being responsible for the lower mortality rate, but, as a matter of fact, the real reason is that the family physician sends these patients to us early Our results in cases of carcinoma of the colon and rectum will be bad until the family physician sends these patients to the surgeon early The general practitioner cannot be expected to make a diagnosis of carcinoma of the colon, but if he knows the suggestive symptoms, he can send the patients to some one who can make the diagnosis, and then early operation can be made In many parts of the country the general practitioner takes it on himself to determine whether the case is an operable one or not He usually determines that it is not operable The surgeon is the only one to determine this question, not the general practitioner Dr Crile leaves no room for argument Statistics are of little value however, unless it is known in what percentage of cases seen by the surgeon an operation was performed For instance Cripps saw 409 cases and operated in 100 His percentage of cures was very high and his mortality was low Dr Crile is right in suggesting that a colostomy be done first as in carcinoma of the colon In the combined two-stage operation, the colostomy is always done as the first stage, this gives an opportunity to remove the rectum at the second operation with very little disturbance to the patient The convalescence is made safe by keeping the wound in good condition by the use of the Carrel-Dakin method Dr Crile's record of twenty cases without a death is very remarkable. I think we can all approach this, however, if we carry out his suggestions

DR WILLIAM J MAYO, Rochester, Minn There is no doubt that the principles Dr Bevan laid down and Dr Crile's advice with regard to the care that should be given these patients after operation will improve results in these cases materially The question of operability is interesting In most large hospitals the patients are sent in for operation not by skilled men of large experience, but by men of less experience, and a very large percentage are sent home from the dispensary as hopeless cases I think that this is true of practically all the large hospitals of this country in the ordinary dispensary form of examination In our early work in this field we had a low mortality, about 5 per cent, and a high percentage of cures, between 50 and 60, but 75 per cent of the patients who came to the clinic, taking them as a whole were sent home as hopeless cases Only thirteen of one hundred patients were alive and well after five years, and we had the paradox of a low mortality and a high percentage of cures, yet few cures We increased operability up to an average of 70 per cent and we had twenty-seven instead of thirteen patients alive at the end of five years, but the mortality percentage had gone up and the cures had come down It is difficult to study this question from the standpoint of mere incidence of mortality The patient and the patient's family and the friends are not very happy over a permanent colostomy, and when the patient is told that by a permanent colostomy the mortality will be reduced about 10 per cent, he will take the increased risk if he has a reasonable chance of having his bowels move in the normal manner It is a fact that the price the patient must probably pay for the opportunity to recover from the operation and remain well is a permanent colostomy I shall look into the operation described by Dr Bevan with great interest because he says function is preserved I have had many patients who after radical operation have a controllable anus in the normal situation, and are alive and well for many years For the present, a permanent colostomy will be necessary in the majority of cases, but earlier operation and better technic will secure more desirable results

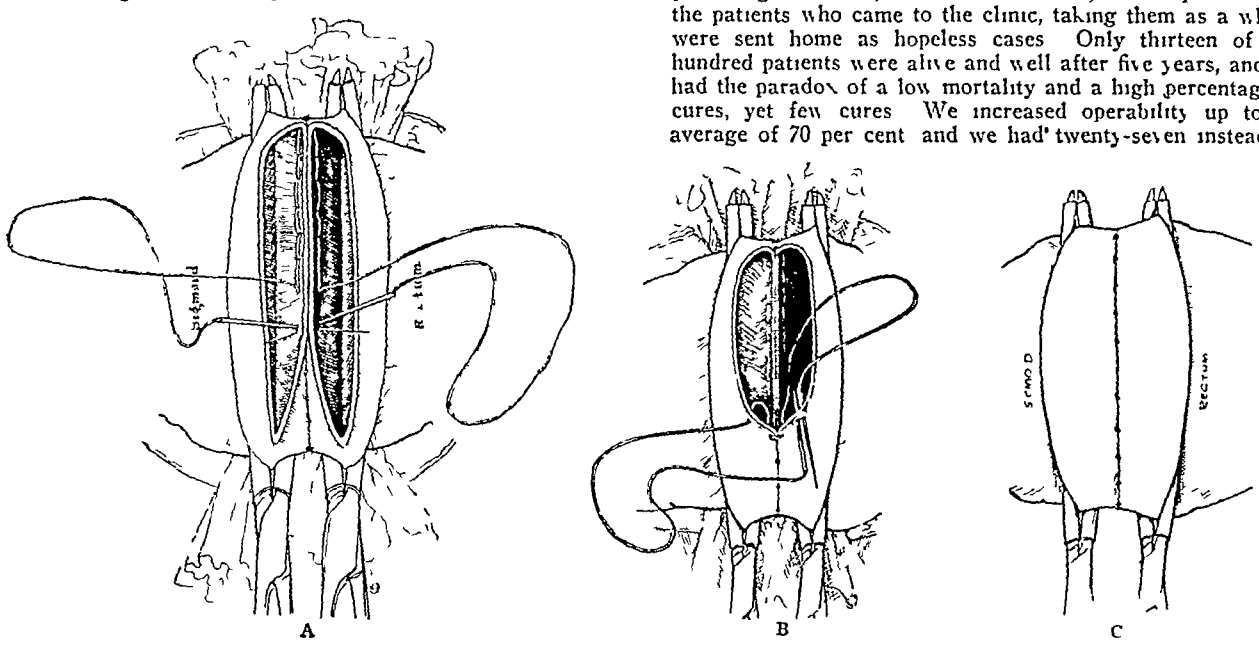

Fig 4.—Technic of excision of cancer of the rectum closure of end to-end anastomosis *A* cobbler stitch (Step 1) *B* cobbler stitch (Step 2) *C* cobbler stitch complete

DR H J WARING, London, England Dr Bevan's paper bears out to a great extent my experience In my early days of surgery, I found that in carcinoma of the large intestine if one attempted resections with end-to-end anastomosis the mortality was very high I soon learned however, that one of the main causes of this was the inability of the bowel in which there is obstruction to join on the part in which there

is no obstruction So I early adopted the principle of making a colostomy on every patient who had a growth in the large intestine Two of the incisions I made resembled those of Dr Bevan's, one on the right side and the other on the left side, an oblique muscle splitting incision In the upper one I did not make an S-sharped curve I almost invariably make a vertical incision within the lateral margin of the rectus abdominis, splitting the posterior sheath I have found by experience that in the majority of cases this incision gives a strong abdominal wall I also adopted the third method first colostomy, second, excision of the growth side-to-side anastomosis and later closure of the colostomy I cannot give statistics from memory All I can say is that the mortality has been decreased enormously As regards the surgery of carcinoma of the rectum, I have had to a considerable extent the experience of Dr Charles Mayo In England whether it is owing to the inferior education of a considerable number of the general practitioners, or because of the desire of the patient not to come under observation at an early stage a very large proportion of patients come at a late stage of the disease When an inguinal colostomy is done an incision is made to introduce the hand into the interior of the abdomen to make out the primary disease and secondary invasion in the adjacent structures When that has been done the decision is made as to what the further procedure shall be In regard to the method of colostomy I always create a well marked curve I generally bring the colostomy mattress suture behind the bowel and bring the loop of the bowel over, putting in two sutures Mr Harrison Cripps, whom I assisted for some time selected his cases carefully His operations were done entirely by the peritoneal route, except in well localized cases of the disease If the growth was adherent to parts around or extended beyond, and was not freely movable, then an excision was not done but a colostomy

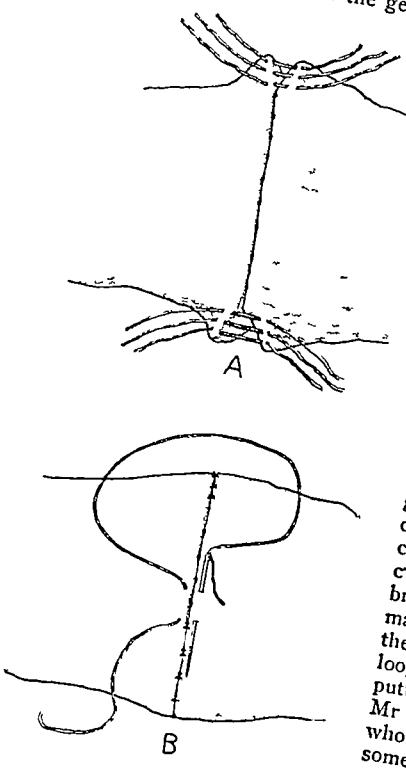

Fig 5—Technic of excision of cancer of the rectum closure of end to-end anastomosis *A* stay sutures *B* interrupted right angle stitch over cobbler stitch *C* complete anastomosis

DR. GEORGE W CRILE, Cleveland Inasmuch as I did not describe the technic I may have left the erroneous impression that the colostomy is permanent This is not so the colostomy is merely temporary At the resection an end-to-end anastomosis is made and cutting off the entire fecal stream at a point above is vitally important especially when the posterior operation is performed which leaves a large absorption area After the anastomosis is healed then as Dr Bevan has described, the temporary colostomy is closed and returned I do not advise operation in the following groups of cases first if there is any involvement of the liver second if there is penetration into the bladder or prostate and third if the penetration goes into the lumbar

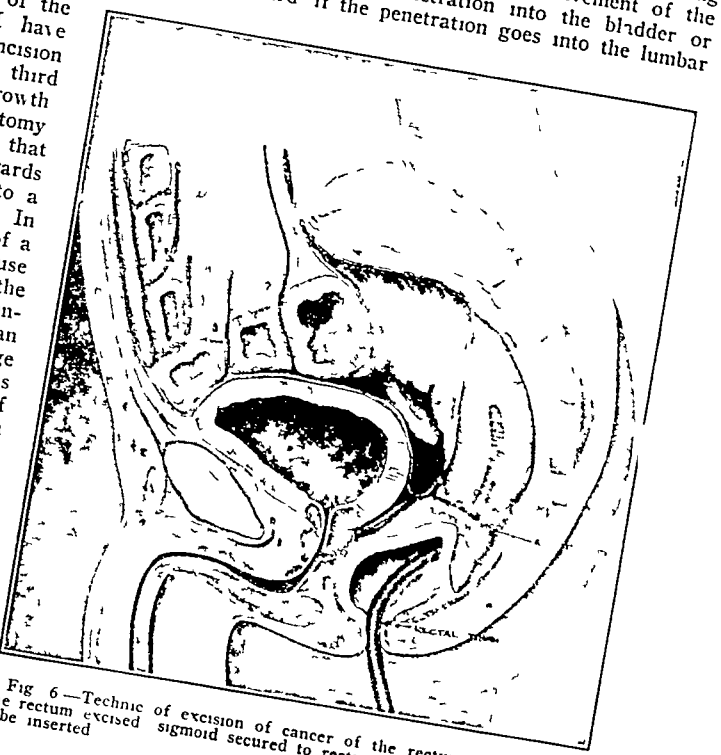

Fig 6—Technic of excision of cancer of the rectum carcinoma of the rectum excised sigmoid secured to rectum by cobbler stitch rectal tube inserted

muscles In the absence of these conditions I always attempt a radical cure By assembling a plan of procedure by means of which the operation is rendered relatively safe we are able to extend the operability accordingly and to widen the scope of operation Only in exceptional cases have I failed to secure anastomosis of the intestine and normal defecation

FEMORAL HERNIA OF THE OVARY*

W W GRANT M D
DENVER

The subject of femoral hernia of the ovary has received it would seem, less consideration than its importance requires The condition is probably more frequent than the few reports indicate, yet, at best, it is not of common occurrence

The decadence of diagnostic skill and efficiency, in general, and the subordination of clinical investigation of disease phenomena to laboratory tests and instruments approaching scientific precision doubtless account in a measure for this condition and for many unnecessary errors in the practice of medicine and surgery Yet it is to be remembered that, especially in ovarian hernia, there is no absolutely conclusive evidence of the contents of the sac, short of demonstration by operation

Prolapse of the ovary is not hernia The very rare forms of ischiatic and obturator hernia of the ovary are chiefly of academic interest For those who may be interested enough to pursue the literature of the

* Read before the Section on Obstetrics Gynecology and Abdominal Surgery at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

subject and to read the most complete reports and outlines of the subject yet made, I may refer to the paper by Robert Barnes[1] of London, and to the most thorough compilation from 1890 to 1910 from the French, English and German, by Heineck[2] of Chicago, while the very interesting paper by Barnard Fuller[3] of London on "Femoral Hernia" should receive special mention A few other miscellaneous reports are found in current literature

Of thirty-eight cases tabulated by English, twenty-seven were inguinal and nine femoral Of 137 cases reported by Heineck, only thirteen were femoral It is clearly manifest that most cases are of the inguinal variety—eight times as many as of all others—and it is not common, while the crural, from experience and by record, is rare It is usually unilateral The predisposing cause is the persistence of the canal of Nuck occupying the analogous position of the processus vaginalis in the male It occurs generally after the postpartum period of life A lax mesentery and stretching and mobility of the broad ligaments by pregnancy is probably a contributory cause The immediate exciting cause is increased intra-abdominal pressure due to a variety of well-known causes The points of least resistance fail first When the tube is present in femoral hernia it is considered congenital The herniated ovary may be normal or pathologic

I report two cases operated on for ovarian hernia in the crural canal, ut I have under observation two her cases of femoral hernia in hich the clinical history of each is such as to satisfy me that both are cases of uncomplicated ovariofemoral hernia One, a woman of 77, has had femoral hernia, right side, for ten years, and until the last two years it would easily protrude and be just as easily reduced by the patient Two years ago its occurrence resulted in pain and some inflammation, which produced a certain amount of constriction and fixation by adhesions In this condition it remains and gives practically no trouble Operation was declined She has had two children It is a small, almond-shaped body and could easily be outlined

Fig 1—Follicular ovarian cyst natural size removed from patient *A* ovary, *B* omentum *C* cyst

The other is a married woman of 35, having no children, the hernia comes and goes with lifting, but is returned without difficulty I have examined the patient carefully when the mass protruded through the femoral ring The objective examination and its shape and size indicate that it is ovarian In neither of these cases was there ever any evidence or indication of intestinal constriction or of a mass of omentum, which I would hardly expect to exist alone or as an uncomplicated hernia of the femoral canal

1 Barnes Robert Am J Obst, January 1883
2 Heineck Surg, Gynec & Obst 15 1912
3 Fuller Barnard South African Med Rec September 1919

REPORT OF CASES

CASE 1—Mrs L J a widow, aged 37, mother of two children, had been troubled with a periodic protrusion of a small mass at the upper and inside of the left thigh for two or three years There was no pain or discomfort, except when it protruded, but finally it became nonreducible, because of mild inflammatory attacks On examination at different times, I found always a small almond shaped mass in the crural canal I thought it probably ovarian and advised operation, which was performed at St Luke's Hospital, Jan 23, 1917 I removed a small, somewhat atrophied ovary, which was confirmed by histologic examination, though it was macroscopically manifest The patient is a domestic—cooks and does general housework I see her not infrequently—the last time two months ago—and she has had no recurrence and feels perfectly well The surgical technic is described in Case 2

CASE 2—Mrs S, a widow, aged 56 years, mother of two grown sons, did ordinary housework in her own home—often washing clothes, etc According to her statement, in 1892 while carrying a 2 year old child, she slipped on the ice and it was then the hernia occurred, she suffered for several days from it and it was then she got a truss and wore it from then until I operated on her It never gave her much trouble until (she called Dr Faith) in August, 1916 It was about five years ago that she noticed the enlargement or tumor just below the hernia It never gave her any distress except when the truss would slip out of place, then the hernia would come down and give her pain, she would have to put it back and adjust her truss to hold it back It was April 9, 1919, that it came down permanently and she could not get it back It never gave her trouble in urinating, or at menstruation time

April 17, 1919, she was sent to me for operation Examination revealed a steel spring truss applied to the left groin The marked depression and discolored, atrophied skin showed that she had worn it faithfully The mass in the femoral canal could be fairly outlined The tenderness and discomfort had been aggravated by recent efforts at reduction From its doughy feel on palpation, with no evidence of intestinal involvement, I thought the tumor at least partly omental I operated the following day, April 18, at St Luke's Hospital, by making the usual incision slightly below and parallel to Poupart's ligament, though making a slight downward curve over the tumor, and turned the skin flap up a short distance above Poupart's ligament The sac and tumor were easily exposed, but I found it necessary in order to dislodge the tumor, to make a downward incision, 2 inches long from the inner angle of the primary incision over the pubic spine, with this the mass was easily delivered It had passed partly out of the saphenous opening The normal ovary was lying just below the femoral ring with the omentum greatly constricted by the ring The omental mass was next in order, and at the lower end was the follicular ovarian cyst The mass measured 5 inches in length The fringed edge of the capsule divided in the operation may be likened to the fimbriae of the tube, but the latter was not involved in the hernia The ovarian pedicle and constricted omentum were ligated separately and the stump of each returned to the abdomen by finger pressure without any difficulty The sac was transplanted and pouched by making a short incision one-half inch above Poupart's

ligament, and curved pressure forceps guided by the index finger in the ring were forced from above through the ring—the fundus of the sac grasped and pulled out of the wound above the ligament Under moderate stretching the sac was ligated close to the fascia with No 1 chromic gut and cut off The same ligature was now armed with a short full curved needle and the incision closed over the stump, which was forced just beneath the surface It was fixed at this point. This technic, it is claimed by Kocher, with reason and extensive experience, removes from the ring whether femoral or internal oblique inguinal hernia, a weak point, which remains when the stump of the sac is left in the ring I closed the ring with two silk stitches through Poupart's and Gimbernat's and Cooper's ligaments, and then with chromic gut, passed first through Poupart s ligament from without inward and the fascial tissues gathered in purse string suture and the needle carried back through Poupart's ligament, this time from within outward and near the primary insertion Traction on the two ends now pulls the puckered fascial tissues directly to the ring, which closes the canal as well as the ring and, in my opinion, makes a stronger, more effective and durable barrier against recurrence than is afforded by the usual methods of operation and of even the normal crural septum It is simple—not so elaborate as when Poupart's ligament is divided and the inguinal canal exposed and, it seems to me, it adds a desirable finishing touch to a delicate and important procedure The 3 or 3½ inch incision gives in most cases, ample room in which to expose the sac and the ring and to apply sutures The skin wound was closed with a running stitch of chromic gut, though I usually use for this purpose a subcuticular stitch of silkworm gut The patient is perfectly well, with no discomfort or sign of recurrence

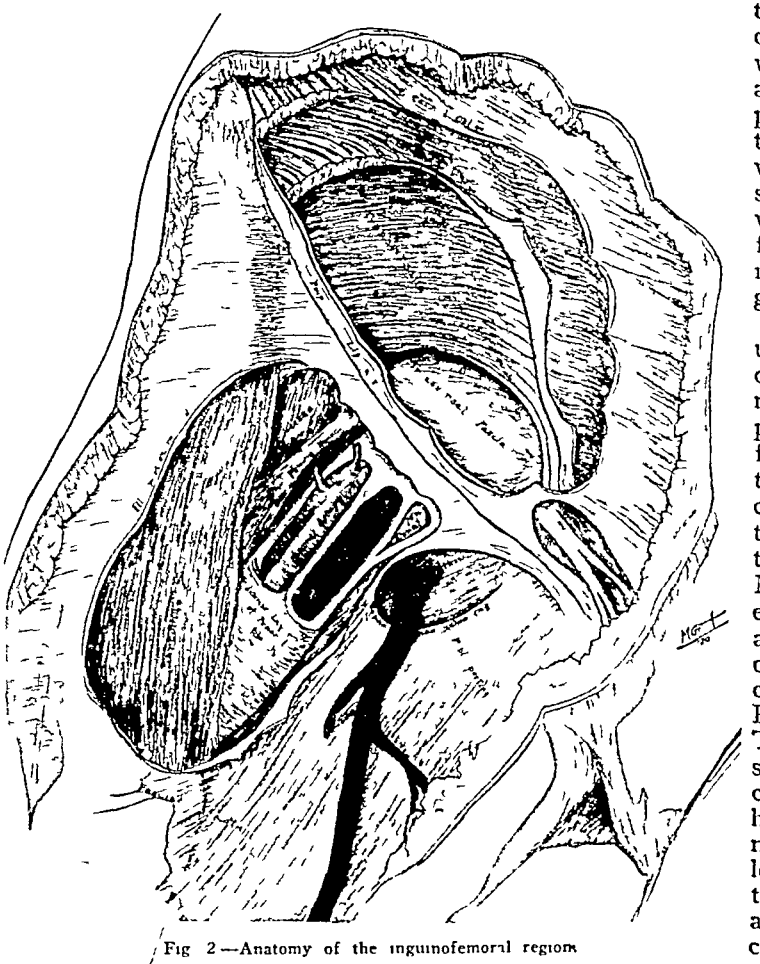

Fig 2—Anatomy of the inguinofemoral region

COMMENT

The unusual and interesting features of this case encourage its report in such detail as seems necessary to a satisfactory presentation of the case as well as of the subject It will be noted that this woman wore a truss constantly for twenty-five years for a hernia—the most difficult and intractable of all hernias to treatment by a truss, and that only on two occasions (August, 1916, and April, 1917) after the initial stage, did she have any attacks of pain Whether the hernia was ever completely reduced is a matter of conjecture, but it is certain that it had not been since she noticed and felt the tumor in the thigh five years previous to operation, during which time the cyst doubtless developed

No reducible, herniated ovary should be removed during the child-bearing period if it can be effectively replaced within the abdomen and its recurrence prevented by operation At other times and when required by pathologic considerations, its removal is advisable

In all operations for femoral hernia, the relation of the femoral vein to the ring should ever be in the mind of the operator

The two chief characters of the Kocher technic in crural and inguinal hernias are the transplanting and pouching of the sac and the use of nonabsorbable stitches in the repair of the posterior wall and in the closure of the crural ring in femoral hernia

At the Fort Logan Recruiting Depot in the spring of 1918, I operated in 110 cases of hernia, most of them oblique inguinal with well formed sacs, only three femoral and two of these long standing, with distinct sacs In all such cases I employed the Kocher technic with such varying modifications suitable to the individual cases as not infrequently invites the initiative of the surgeon

I do not believe it usually necessary to open the inguinal canal, or to divide Poupart's ligament in femoral hernia as introduced and advocated by Kammerer in the Lotheisen operation, nor that of Moschcowitz and others who proceed from above downward, opening the inguinal canal and dividing Poupart's ligament This might be necessary in exceptional cases of strangulated hernia The Bassini method is simple, but leaves the stump of the sac in the ring, and Bassini closes the canal by cross stitches, while Macewen makes a pad of the sac as in inguinal hernia

I do not share the objection to the use of the nonabsorbable stitch on the ground that it may become infected and have to be removed Infection is usually fatal to the perfect success of any procedure in plastic surgery, but silk and linen should be the last material to introduce it The surgeon should have more confidence in their sterility, obviously it seems to me, than in any form of catgut He can, as is my custom, resterilize the former at the moment of operation, and if the field of operation and everything else is aseptic, there should be no fear of infection or of the future of the silk

Especially in hernia operations subjected as the parts are to constant intra-abdominal pressure of

varying degree, it is of unusual importance that the reconstructed canals and rings should be strongly supported until the fascial tissues especially are in a perfect state of repair, and this does not occur within ten days But I do not think the permanent nonabsorbable stitch necessary in ordinary abdominal wounds for the usual intra-abdominal conditions

325 Mack Building

ABSTRACT OF DISCUSSION

DR GEORGE H LEE, Galveston, Texas Femoral hernia is usually stated to form about 10 per cent of all hernias It is probably never congenital, being the result of the relaxation of late adult life and intra-abdominal pressure, and it has been frequently connected with childbearing Dr Grant says that there is no conclusive evidence that enables a diagnosis to be made definitely before operation, and yet two of his patients have not been operated on and the data he gives

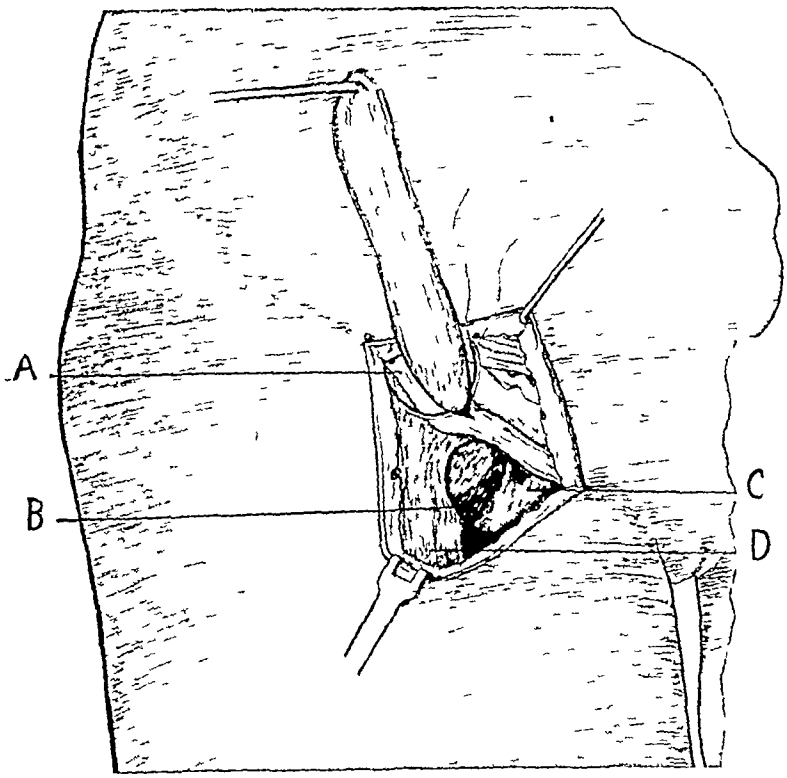

Fig 3 —Transposition method in the radical treatment of femoral hernia (Kocher) *A*, Poupart s ligament, *B* crural canal *C* pectineus fascia, *D* femoral vein in sheath

in connection with those cases would seem to fully substantiate his diagnosis The diagnostic symptoms are the presence of a movable or immovable, more or less almond shaped and almond size body tender on pressure and producing nausea if firmly pressed When the hernial contents include also omentum, intestine or a cyst, as in one of Dr Grant s cases, the diagnosis is correspondingly difficult and indefinite

DR WILLIAM W GRANT, Denver I think the cyst was follicular ovarian, because of its position at the time of operation and the fact that the content was a clear whitish liquid I was careful not to attempt to free the cyst from the mass, because of the danger of rupturing it, and I was anxious to preserve it intact In reference to the contents of the hernial sac It is not difficult when it is a simple uncomplicated ovarian hernia of the femoral canal, but when complicated with other pathologic contents these cannot be differentiated except by operation None of the cases reported presented any symptoms whatever of bowel strangulation or constriction, therefore it was not difficult to exclude the intestine The case from which the specimen was removed was unusual I have never seen any such specimen in either femoral or inguinal hernia The neoplasm is especially an interesting feature

RELATION OF HYPERPLASIA OF ENDOMETRIUM TO SO-CALLED FUNCTIONAL UTERINE BLEEDING*

EMIL NOVAK, M D
BALTIMORE

In most cases of uterine hemorrhage a definite anatomic cause can be found in the internal generative organs—the uterus, the tubes or the ovaries With amenorrhea, by contrast, the cause is most frequently of a constitutional nature In a certain proportion of those cases of uterine bleeding which are due to frankly anatomic causes, the mechanism of the abnormal hemorrhage is clear This is preeminently the case with such destructive lesions as cancer, in which the bleeding is quite easily explained by the actual opening up of blood vessels, as a result of ulcerative processes

In a second group of cases, bleeding is associated also with gross disease in the pelvis, but the explanation of the mechanism involved is not so clear This type is well illustrated by the ordinary form of pelvic inflammatory disease Is the menstrual excess which is so often seen in these cases due merely to an exaggeration of the normal menstrual hyperemia, or is it to be explained, as some assert, by a more fundamental disturbance of the function of the ovary, which is so commonly involved in the inflammatory process? There is no little evidence to support the latter point of view, which has been championed by Hitschmann and Adler[1] For example, hemorrhage is frequently absent, even in the most severe cases of adnexitis, in which a high grade of pelvic hyperemia is present On the other hand, it is frequently present in old low grade inflammatory conditions, in which there is little or no active hyperemia Hemorrhage is certainly not due to hyperemia alone, for it is unusual at any other time than at the menstrual periods Furthermore, pelvic inflammation does not tend to cause uterine bleeding after permanent cessation of ovarian function, that is, after the menopause As a matter of fact, it is difficult to conceive how even the most intense hyperemia of the uterine mucosa could in itself cause bleeding on the scale so often observed in cases of menorrhagia It is suggestive, also, that removal of the ovaries will always check bleeding in this class of cases Many other facts might be adduced to lend weight to the contention that the abnormalities of menstruation so frequently associated with pelvic lesions are probably to be classed as functional, in the sense in which this much abused term is usually

* From the Gynecological Department of the Johns Hopkins University Medical School

* Read before the Section on Obstetrics Gynecology and Abdominal Surgery at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Hitschmann and Adler Arch f Gynak **100** 231 1913

employed There is nothing surprising in this explanation when we bear in mind that the normal hemorrhage of menstruation is universally conceded to be due to the internal secretion of the ovaries

CLINICAL CHARACTERISTICS OF FUNCTIONAL UTERINE BLEEDING

The type of functional hemorrhage with which I propose to deal in this paper, however, embraces a much more limited group of cases—those in which no demonstrable pelvic disease exists Hemorrhage of this functional, idiopathic or essential type, as it has been variously called, is especially common at puberty (hemorrhage of puberty) and at the menopause (climacteric or menopausal hemorrhage) By far the largest number of cases is observed at or about the menopausal age The great practical bearing of this fact is obvious, in that one is frequently called on to distinguish between functional hemorrhage and that due to early carcinoma This distinction is usually possible by means of, and only by means of, the microscope Although most common at the two extremes of menstrual life, functional uterine hemorrhage may occur at any period during the reproductive life of the woman The bleeding is characteristically of the type of menorrhagia, rather than metrorrhagia, although the latter occasionally occurs In some of these cases, however, the metrorrhagia is apparent rather than real, the menstrual periods being so much prolonged that bleeding is practically constant In itself there is no pain associated with this form of uterine hemorrhage It is interesting to note that in these cases menstruation is often delayed, and it is not infrequent to observe periods of amenorrhea, lasting, in some cases as long as several months Many factors have been invoked in the effort to explain bleeding in cases of this general type—arteriosclerosis of the uterine vessels, the "insufficientia uteri" of Theilhaber, and other theories

HYPERPLASIA OF THE ENDOMETRIUM

The first point which I should like to emphasize is that a very common histologic finding in these so-called functional cases of uterine bleeding is the condition designated as hyperplasia of the endometrium—one of the most distinctive of all lesions of the uterine mucosa The term should not be confused with the older designations of hyperplastic or hypertrophic glandular endometritis, terms which have become obsolete since the advent of our newer knowledge of menstrual histology Hyperplasia of the endometrium, in the sense in which the term is here used, is a condition which was first described, with remarkable accuracy, by Cullen,[2] as far back as 1900 Since then this author has called attention to the condition in various publications, which I[3] reviewed in a previous paper on this subject In hyperplasia there is, as the term indicates, a genuine proliferation of the endometrium —an increase in both its epithelial and stromal elements As a result of this hyperplasia a characteristic pattern is produced

The epithelium is thickened and compact, and at times two or more layers may be present There is no lack of uniformity of the cells as in the case of carcinoma The glands vary considerably in size some are small, others are large and cystic sometimes enormously so (Fig 1) That these large glands are not to be looked on as retention cysts is evident from the fact that the epithelium instead of being flattened out is usually intact The dilated glands are not usually scalloped, as they are in the stage of normal premenstrual hypertrophy, their walls are most frequently quite smooth, and of rather stiff, parchment-like appearance The stroma is very abundant dense and compact, resembling that normally found in the deeper layers of the endometrium Its proliferative activity is attested by the not infrequent occurrence of mitoses, an otherwise rare finding in the stroma, except with malignancy The proportion between glands and stroma varies in different cases and in different portions of the same endometrium It is probable that these variations are in part due to mechanical factors such as the crowding into the uterine cavity of the overgrown endometrium Not infrequently, large, hypertrophic glands are seen immediately beneath the surface where in the normal endometrium, one finds only the narrow necks of the uterine glands (Fig 2) Thromboses are often observed, although their significance is not clear

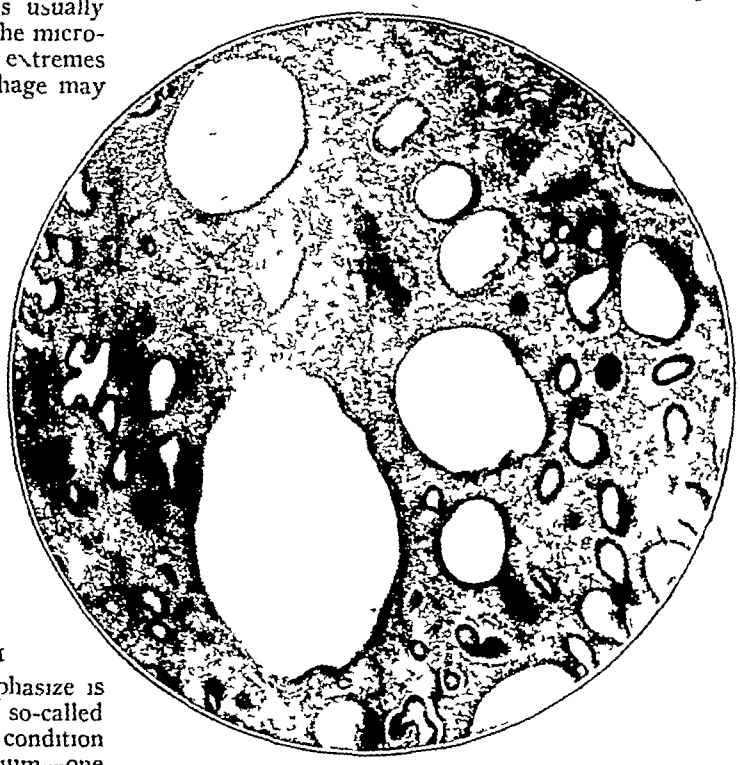

Fig 1.—Hyperplasia of endometrium The patient, aged 44, was subjected to curettage for profuse menorrhagia of eight months' duration The pelvic organs were normal

Grossly the endometrium with few exceptions is much thicker than normal At times it is so luxuriant and polypoid that curetting yields many drams of tissue, and the gross picture of malignancy is thereby closely mimicked However, the microscopic picture presented in cases of hyperplasia is unmistakable in the outspoken case, certainly it cannot be confused with carcinoma This is of much importance when we

2 Cullen T S Cancer of the Uterus New York D Appleton & Co 1900 p 479 Ann Gynec & Pediat 17 413 1904 Adenomyoma of Uterus Philadelphia W B Saunders Company 1908 p 180 Canad M Assn J 3 658 1913
3 Novak Emil Am J Obst 75 996 (June) 1917

recall, as has already been emphasized, that both conditions are characterized by bleeding, occurring usually at or near the menopausal age

THE FINDING OF HYPERPLASIA ONLY IN CASES OF BLEEDING

A large number of cases of hyperplasia of the endometrium have been encountered in the gynecologic department of the Johns Hopkins Hospital In my own experience the condition has never been found except when uterine bleeding has been a symptom, the menstrual history corresponding to the description of the ordinary cases of functional uterine bleeding given in the foregoing While seen most characteristically with the functional cases, it may be associated with lesions that are in themselves notorious producers of abnormal bleeding It is not rare, for example, to find this endometrial condition in cases of myoma and,

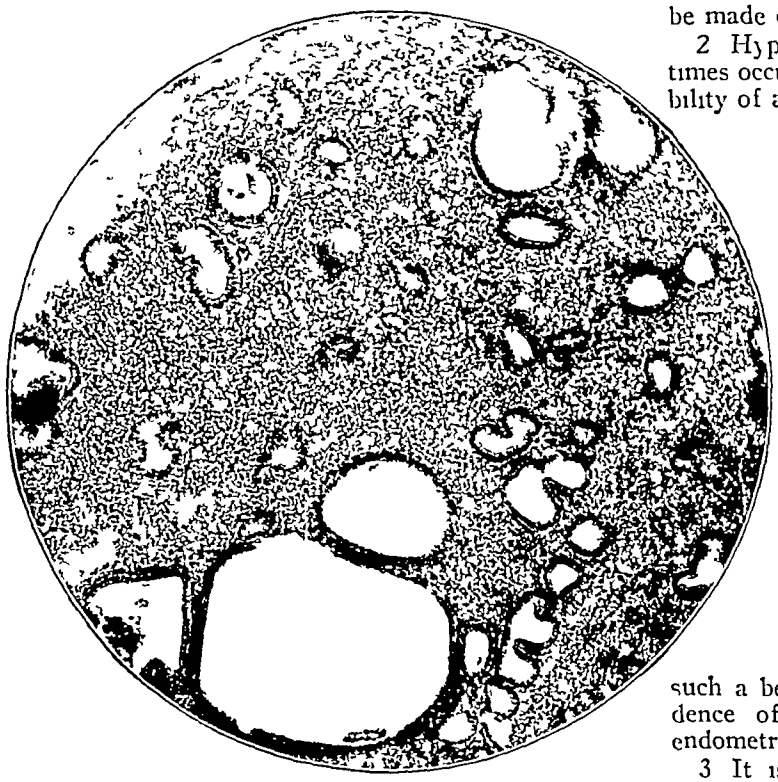

Fig 2—Hyperplasia of endometrium in a girl of 18 years There was excessive menstruation lasting often from three to five weeks since inauguration of function at 14 and frequent amenorrheic intervals

perhaps, even more often, with adenomyoma There is nothing paradoxical in this fact, especially if we bear in mind the possibility, already referred to, that the uterine bleeding in many cases of pelvic disease may, in the last analysis, be due to a disturbance of the internal secretion of the ovaries

THE RÔLE OF THE ENDOCRINE GLANDS

Cases of menopausal hemorrhage, as well as of the hemorrhage of puberty—the very cases in which hyperplasia is found on microscopic examination—are undoubtedly associated with endocrine disorders, even though the exact nature of the latter may be indeterminable in the present state of our knowledge The finding in these cases of such a definite structural alteration as hyperplasia would seem at first sight to speak against the functional nature of the bleeding We must bear in mind, however, that the endometrium is, as it were, only the creature of the ovary Certainly the remarkable cyclic changes of the uterine mucosa which are associated with normal menstruation are directly due to the internal secretory activity of the ovary If the latter is disordered, it is natural to assume that the endometrial response will also be abnormal In the functional hemorrhage that we are now considering, the ovarian secretion is commonly believed to be disturbed, whether primarily or secondarily The fact that the endometrium in such cases shows the typical hyperplasia suggests, therefore, that the latter may be merely the result of the disturbed endocrine function A number of interesting facts bearing on this question may be submitted

1 Functional uterine hemorrhage, as already stated, may occur at any age during menstrual life, but it is most common at puberty and the menopause, especially at the latter period Exactly the same statement may be made of hyperplasia of the endometrium

2 Hyperplasia with excessive menstruation sometimes occurs in very young persons, in whom the possibility of an inflammatory etiology may reasonably well be ruled out Recently, I observed a typical case in a girl of 12 years, who had profuse uterine bleeding for three months Figure 3 represents the microscopic picture of the endometrium from a girl of 18, on whom I recently performed curettage for severe menorrhagia of several years' standing It will be seen that the pattern is identical with that shown in Figure 1, which is taken from a patient of 44 The occurrence of hyperplasia in these very young patients, together with the frequent presence, in such cases, of other endocrinopathic stigmas, points to a probable endocrine origin The histologic picture described in the foregoing as characteristic of hyperplasia of the endometrium has been described by some as of inflammatory origin Driessen,[4] for example, speaks of it as "endometritis necrobiotica" There does not seem to me, however, to be the slightest justification for such a belief Certainly there is no microscopic evidence of inflammation in the typical hyperplastic endometrium

3 It is only during the reproductive life of the woman—that is, during the period of ovarian activity—that both hyperplasia and functional bleeding are found They disappear after the menopause, and may always be checked by removal of the ovaries Occasionally curetting, in cases of uterine bleeding occurring several months after apparent menopause, may yield a hyperplastic endometrium These cases are analogous to the not infrequent instances of pregnancy occurring after apparent menopause They are apparently to be explained by the fact that cessation of ovarian function is not actually complete Or, as Schroder [5] suggests, it is possible that the endocrine disturbance involves endocrine glands other than the ovary

4 Hyperplasia and the associated menstrual bleeding are not usually cured by curettage Observations on this point are still rather meager, owing to the fact that this endometrial condition has not as yet gained general recognition as a histologic entity The results

4 Driessen Zentralbl f Gynak 38 618 1914
5 Schroder Arch f Gynak 104 27 1915

of Schickele and Keller[6] are, however, of interest in this connection Of 111 curettages performed for uterine bleeding, thirty-eight were successful and sixty-one were failures Among the thirty-eight successful cases, there were only four (10 per cent) hyperplasias Of the sixty-one unsuccessful cases, nine (15 per cent) were hyperplasias Good results are too often taken for granted when curettage is performed for functional bleeding Most frequently this assumption is not borne out by the subsequent history of the patient Busse[7] found only 10 per cent of actual cures in 505 cases of curettage for uterine hemorrhage due to various causes He did not differentiate the cases of hyperplasia in his statistics, but there is no doubt that a great many were included, and that they would hardly show better results than the general average here quoted

5 When a hyperplastic endometrium is curetted away it is not replaced by a normal mucosa, but by a tissue similar to that removed This is demonstrated by the examination of sections from cases in which curettage has been repeated one or more times The deduction to be drawn from this fact is that the lesion is not a local one, as it is, for example, in cases of the postabortive type, in which curettage practically always brings about a cessation of the bleeding By curetting in cases of hyperplasia, on the other hand, we are attacking the disease at the wrong end, for we merely remove the endometrial manifestation of the underlying endocrine cause, which still remains operative

6 In a certain number of cases, curettage, especially if repeated a number of times, may result in cure In these cases it seems likely that either spontaneously or as a result of the operation there occurs a readjustment in the function of the ovary

7 Radium and the roentgen ray, which destroy the graafian follicles in the ovary, exert a most beneficial effect on the type of bleeding under consideration

8 Even if hyperplasia were a primary disease of the endometrium, it would be difficult to suggest any satisfactory explanation of the uterine bleeding that accompanies it By comparison, the hyperemia in cases of hyperplasia is certainly much less intense than in such conditions as acute endometritis, and yet, in the latter, menstruation is frequently normal, and may be absent altogether In other words, disease of the endometrium without involvement of the ovary is not characteristically associated with bleeding, while disease of the ovary, even though the endometrium be normal, is frequently associated with excessive menstruation

IS HYPERPLASIA A CONSTANT FINDING WITH FUNCTIONAL UTERINE HEMORRHAGE?

The question next arises as to whether all cases of functional hemorrhage are associated with hyperplasia of the endometrium This is not an easy matter to determine, as the clinical exclusion of anatomic causes is sometimes impossible For instance, hemorrhage supposedly functional may be due to a concealed uterine polyp, or to a small, unrecognized myoma, or to an early carcinoma, or to a low grade adnexal involvement Until a much larger number of cases is studied, therefore, we cannot be definite on this point The impression that I have gained, however, from the study of a rather large number of cases, is that unless hyperplasia is found on curetting, we should not be too quick to assume the functional nature of the bleeding

SUBSERVIENCY OF THE ENDOMETRIUM TO THE OVARY

The conception that pathologic alterations in the endometrium may be of ovarian origin is not by any means a new one Brennecke,[8] as far back as 1882 spoke of what he called "endometritis ovarialis" Somewhat similar ideas were suggested by Czempin, Gottschalk and Franz These observations were published before the epoch-making work of Hitschmann and Adler[9] on the menstrual histology of the endometrium, and there is no doubt that the endometrial

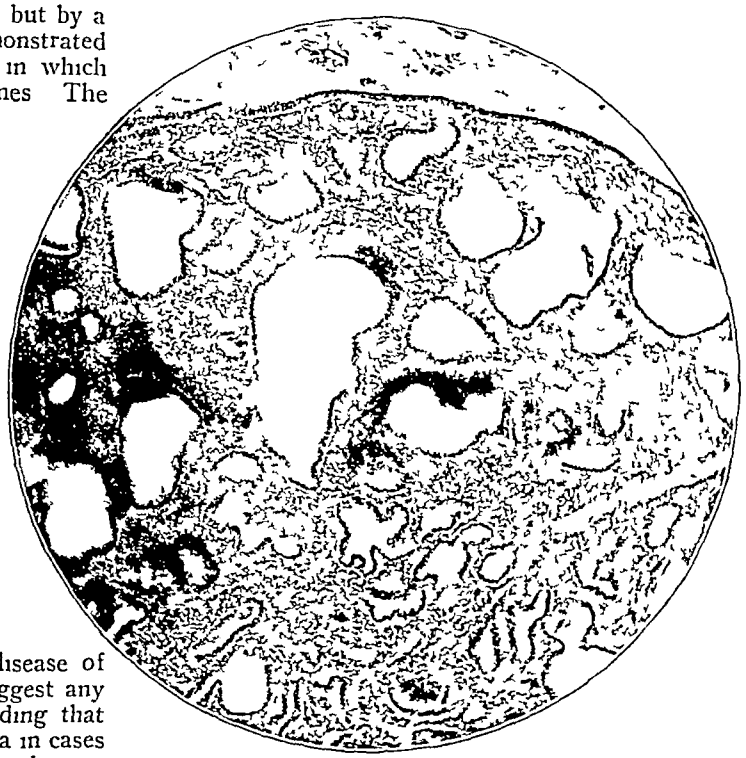

Fig 3.—Large glands immediately beneath surface Crowding of glands was perhaps due to large overgrowth of endometrium many drams of which were removed at curettage The patient a single woman of 18 had a history of almost continuous uterine bleeding for one year

changes that were described really represent various stages of the premenstrual hypertrophy normally exhibited by the uterine mucosa These earlier observations are of interest, however, in that they indicate a recognition of the habitual subserviency of the endometrium to the ovary Lauth[10] has shown that the injection of ovarian extracts may cause hyperemia and hemorrhage, together with definite changes in the endometrium and myometrium

The investigations of Schröder[5] are especially interesting in this connection in that they have to deal directly with the question of the ovarian etiology of

6 Schickele and Keller Arch f Gynak 95 586 600 1912
7 Busse Prakt Ergebn d Geburtsh u Gynak 2 376 1910

8 Brennecke Zur Aetiologie der Endometritis fun o a e e der chron chen hyperpla irenden Endometritis Ol hau en Arch f Gynak 20 455 18 2
9 Hitschmann and Adler Monat chr f Geburt h u Gyn k 27 1 1908
10 Lauth Monat chr f Geburt h u Gyn l 12 1 1 1

hyperplasia This author, from a study of fifty-four cases, concluded that the characteristic ovarian changes consist of a failure of follicular rupture, and a consequent absence of corpora lutea in these cases As the corpus luteum is believed to be essential to the premenstrual secretory stage normally exhibited by the endometrium, it is not surprising that this secretory stage is absent in cases of hyperplasia In other words, there is a persistence of the proliferative stage, which Schroder believes is due to the internal secretory activity of the follicles To put it another way, the development of the endometrium stops short of the secretory stage, the picture of hyperplasia representing merely a persistence and an exaggeration of the proliferative phase The conclusions of Schroder are of great interest, but they still lack confirmation

The injection experiments of Schickele [11] also throw an interesting light on the physiologic relation between the endometrium and the ovaries This investigator found that, generally speaking, the injection of extracts of the ovary exerts a more powerful inhibitory effect on the coagulation of blood than does the injection of uterine extracts If, however, the uterine extract is derived from a patient who has had excessive bleeding, it is found to be more potent than the ovarian extract in the inhibition of blood coagulation He suggests that the inhibitory substance is formed in the ovary and passed on to the uterus, and that the excessive menstrual bleeding may thus be due to the presence in the endometrium of excessive amounts of this coagulation-inhibiting substance A similar theory has been urged by Sturmdorf,[12] Goffe,[13] and others This explanation is only a variation of the point of view that I am urging, that a functional disturbance of the ovary is the responsible factor in the uterine bleeding of the so-called idiopathic type—the very cases in which, as already noted, we so frequently encounter hyperplasia of the endometrium

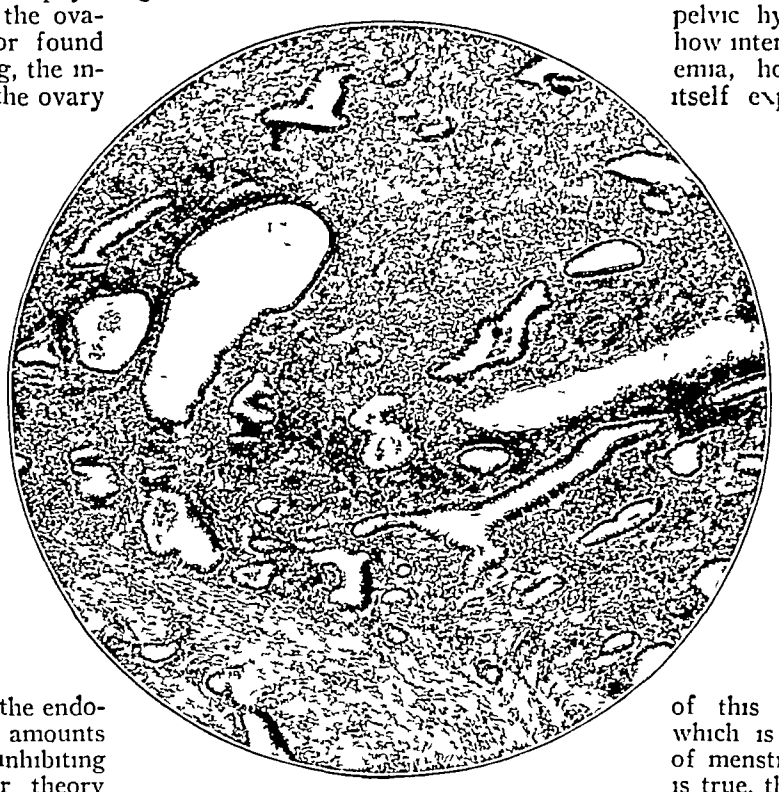

Fig 4.—Typical hyperplasia of endometrium in a case of adenomyoma of the uterus, the chief symptom of which was menorrhagia

THE NATURE OF THE ENDOCRINOPATHY

As yet it is not possible to state whether the ovarian disorder is in the nature of excessive or of diminished function Female hypogonadism is a frequent and well defined clinical entity, being well typified by the phenomena of the menopause, either natural or surgical Much less is known as to the opposite condition —female hypergonadism, or hyperoophorism It is surprising to note the looseness with which this term has been employed by various authors There is no convincing scientific evidence, for example, for ascribing precocious puberty to excessive secretion of the ovary, as has been done by various authors—there is, indeed, good evidence against this view The administration of ovarian extracts, even in human beings, has at times appeared to cause excessive menstruation but such observations are few and of rather doubtful significance

In the absence of any structural changes in the pelvic organs, it would seem logical to explain excessive menstruation as being due to excessive ovarian secretion In this connection it is worth while emphasizing a point frequently overlooked in the consideration of the physiology of normal menstruation, which, after all, should be taken as the point of departure in the study of menorrhagia It is generally stated that the ovarian secretion causes menstruation by inducing a pelvic hyperemia No matter how intense the grade of hyperemia, however, it cannot in itself explain the hemorrhage of normal menstruation No explanation indeed, is adequate unless we assume the presence in the endometrium of some local factor that makes the endometrial vessels much more permeable at the menstrual period than at other times It is possible that the same factor is responsible for the noncoagulability of menstrual blood From the work of Schickele and Keller,[6] it seems probable that the ovary is responsible for the presence in the endometrium of this physiologic principle, which is the immediate cause of menstrual bleeding If this is true, the occurrence of menorrhagia in cases of hyperplasia of the endometrium would point to the probability of an excessive functional activity on the part of the ovary

In this connection I have been struck with the frequency with which hyperplasia of the endometrium is found in connection with adenomyoma of the uterus (Fig 4) The latter condition represents what is, to all intents and purposes, a hyperplasia of the uterine musculature, just as hyperplasia of the endometrium represents a proliferation of the endometrial elements The interesting possibility suggests itself that perhaps both hyperplasia and adenomyoma may be due to the same underlying ovarian dyscrasia

THE OVARIAN ELEMENT THAT IS CONCERNED

It is not very satisfying, in the present state of our knowledge, to speculate as to the relative importance of the corpus luteum and the other ovarian elements in the production of hyperplasia Two apparently incongruous clinical factors have struck me as bearing on

11 Schickele, München med Wchnschr 58 123 1911
12 Sturmdorf New York State J Med 11 460 1911
13 Goffe New York M J 100 109 1914

this point First, the bleeding of hyperplasia is characteristically in the nature of menorrhagia, that is, the periodicity of menstruation is usually preserved This would suggest an influence on the part of the corpus luteum, which is preeminently the cyclic structure in the ovary Second, no matter at what period the endometrium is curetted in a case of hyperplasia, the histologic pattern is practically the same, although the degree of change may vary considerably, just as cases vary in the severity of their clinical symptoms In other words, the endometrium, in cases of hyperplasia, does not exhibit the characteristic cyclic changes seen normally at the various menstrual epochs This observation, in contrast to the one previously mentioned, would suggest that the corpus luteum influence is in abeyance When these two observations are explained and harmonized, the problem will be well advanced toward solution After all, little will be gained from any extended discussion of the etiology of hyperplasia until we know more concerning the nature and functions of the ovarian hormones—I use the plural number advisedly, for it seems certain that the ovary possesses more than one hormone

THE PRACTICAL LESSON TO BE DRAWN

Too many gynecologists are inclined to explain all cases of uterine hemorrhage on the basis of some definite structural disease in the pelvis, without taking into account the importance of pathologic physiology as a possible factor Menstruation is in itself a physiologic hemorrhage, and yet no one would maintain that it is due to the hypertrophic endometrium found just before its onset It is the ovarian secretion which is universally accepted as the ultimate cause of the phenomenon Why then speak of an important group of cases of uterine hemorrhage as caused by hyperplasia, or even by a "local biologic factor" in the endometrium, when both the hyperplasia and the "local factor" are merely manifestations of the same underlying cause—a disordered ovarian function?

SUMMARY

The cardinal points that have been elaborated in this paper may be thus set down

1 Functional uterine bleeding, occurring in the absence of any gross pelvic disease is very common at the menopause, when it often leads to the suspicion of malignancy It is next most frequently observed at or near the time of puberty, but it may occur at any age The bleeding is commonly of the type of menorrhagia, with not infrequently periods of amenorrhea

2 A frequent histologic finding in these cases is the condition that has been called hyperplasia of the endometrium This is characterized by an overgrowth of both the epithelial and stromal elements of the endometrium, with the production of a perfectly distinctive histologic pattern, which makes its recognition easy by means of the microscope

3 There are good reasons to believe as I have shown, that hyperplasia is not a primary disease of the endometrium, but that it is secondary to an endocrine disturbance of the ovary The exact nature of this functional disorder, and the precise histologic changes in the ovary which are associated with it, have not as yet been satisfactorily determined

4 The secondary nature of hyperplasia of the endometrium explains the failure of curettage to bring about permanent cessation of the menorrhagia observed in these cases This procedure merely attacks a local manifestation of the underlying cause—an endocrine disturbance involving the ovary

ABSTRACT OF DISCUSSION

DR LUCIUS E BURCH, Nashville Tenn Seventy-five per cent of cases of uterine bleeding are due to one of the five following conditions Cancer, abortion fibroid tumor, extrauterine pregnancy and the so-called endometritis that is associated with pelvic inflammation Hyperplasia of the endometrium is sometimes found associated with one or more of these conditions Functional bleeding occurs only during the period of sexual activity, and is not associated with any palpable or visible pathology either of the uterus or the appendages Dr Novak claims that it is due to an endocrine disturbance, and he uses the argument that is almost unanswerable that it is found only during the period of ovarian activity and that it is cured by the removal of the ovaries He does not, of course, advise the removal of the ovaries for the relief of this condition My own opinion coincides with his I trust the time is near at hand when the question of the endocrine system in relation to uterine bleeding and menstruation will be cleared up The curet does no good in this or in any other condition It is an instrument that should only be used for diagnostic purposes

DR HENRY P NEWMAN, San Diego, Calif What is your treatment of this condition?

DR. EMIL NOVAK Baltimore Dr Burch has very properly emphasized the limitations of curettage in cases of this type This procedure is usually indicated however, for purposes of diagnosis In patients at or near the menopausal age curettage should be performed in order to exclude the possibility of cancer As to the treatment of functional hemorrhage, we cannot as yet speak with any degree of finality Since the hemorrhage is of endocrine origin, the rational treatment would seem to be along the lines of organotherapy Unfortunately however, the results of this plan are not usually very striking In some cases, the thyroid extract appears to exert a beneficial effect. In a recent case of functional bleeding of three months' duration observed in a patient of twelve years, thyroid extract checked the bleeding almost immediately, although a previous curettage had been unsuccessful In most cases, however, the results of thyroid therapy are disappointing, and at times the bleeding seems to be made worse The administration of ovarian extracts, and especially of those derived from the corpus luteum at times also seems to be of value, although here again the results are anything but constant It would seem that the nature of the endocrinopathy varies in different cases Many gynecologists perform repeated curettage in these cases It is hard to explain the cures which occasionally follow this procedure except perhaps on the assumption that there has been some alteration of the ovarian function In the more stubborn cases the two measures which suggest themselves are radiotherapy and hysterectomy By means of the former it is possible to diminish the menstrual flow or to check it entirely if the latter object is desirable as in the case of women at the menopause In this latter group finally, hysterectomy is resorted to by some gynecologists for the reason that the ovaries and their secretion are left undisturbed

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Influenza Prevalence in Newark by Age and Sex—Although the incidence in sexes has been practically evenly divided Spanish influenza has apparently shown a marked preference for certain age groups Among 27 161 cases recorded during September, October and November the age groupings have been unusual 12 940 were between 20 and 40 years 47 per cent In the ten-year age periods the highest prevalence was between 20 and 30 years 7 550 cases The ten year period 1 to 10 years had 4 741 cases and from 30 to 40 years 5,390 cases In five-year periods under 20 the highest prevalence was between 15 and 20 years, 3 309 cases—*Health Bulletin*, Newark N J

ROENTGENOGRAPHY AND TRANSILLUMINATION

COMPARATIVE VALUE IN DIAGNOSIS OF DISEASES OF THE FRONTAL AND MAXILLARY SINUSES AUTHOR'S METHOD OF TRANSILLUMINATION *

H H BRIGGS, M D
ASHEVILLE, N C

Roentgenography and transillumination offer valuable objective evidence of the condition of the superficial nasal accessory sinuses Which of the two is more valuable is debatable, depending on the anatomic relationship, the modus operandi, and on how much the observer has studied the various methods of each while comparing his diagnosis with his surgical findings The one method supplements, frequently corroborates, and occasionally refutes the findings of the other If they did more they would together form the sine qua non of sinus diagnosis, and their findings would be pathognomonic If taken jointly, and in connection with other symptoms and signs they often prove to be determining factors in establishing a diagnosis, and frequently suggest the proper therapeutic procedure

All agree that the roentgenogram better outlines the sinus, and offers definite limits to guide the operator It alone furnishes positive evidence of absence of a frontal sinus, the shadow of which by transillumination might indicate an infected sinus On the other hand, the rays making the plate must pass through the head, the greater part of which is foreign to the parts we wish roentgenographed Consequently there may be in the plate misleading shadows caused by many parts within the cranium posterior to the sinuses On the other hand, the translucency of a sinus is little interferred with by extraneous parts except by slight variations of thickness in the bony walls and overlying soft tissues Transillumination requires less skill, and is quickly and inexpensively done by the clinician himself, while the roentgenogram, correctly made is the product of a rather highly specialized, and, therefore, expensive technician, requiring careful interpretation by either the technician or, preferably, the clinician It is just as essential for every clinician to be able to interpret the roentgenogram—although he may not have made it—as it is for him to perceive the translucency of the sinus by the electric light Every sinus plate reveals details to the interpreter which no one can fully describe to him, and to operate from another's findings is like striking where some one points

ROENTGENOGRAPHY

It is not intended to describe here the technic of making sinus plates other than to discuss the two usual positions of exposure, namely, the nose-chin and nose-forehead positions of the plate, and to describe the special advantage of each in exposing the frontal and maxillary sinuses In either position the axis of the tube should be parallel with the plate, and the principal rays should pass through the special part to be roentgenographed at right angles to the plate Authorities agree [1] that a soft tube with intensifying screen and a moderate amount of milliamperage are best adapted for the deep penetration and detail demanded in sinus roentgenography For the sake of correct detail, the part to be exposed should be placed as close to the plate as possible At the same time, consideration must be given to the density of the tissues through which the rays must pass before entering the sinus which is to be roentgenographed, and to fulfil these conditions the position approximating the nose-chin position of the plate is most admirably adapted for the maxillary sinus The base of the skull offers two prominences of bone of considerable resistance namely, the lesser wings of the sphenoid, and to a much greater degree the petrous portions of the temporals It is, therefore, desirable to select a position that will allow the projection of these parts to fall on the plate outside the projection of the sinus which is to be roentgenographed

In the nose-chin position the projection of the lesser wings of the sphenoid bisects the orbits horizontally, and they are seen as narrow curved lines passing outward and upward through the orbit, and the petrous portions are superimposed on the upper incisors, and, therefore, just below the shadow of the antrum The exact position of the plate with reference to the nose and chin depends on the type of face In the average physiognomy the tip of the nose should be about 1 cm from the plate, a person with a prominent nose and receding chin should rest with the nose on the plate, or perhaps pressed deeply against the latter, while the opposite type of dish-face may require the nose lifted 1 or 2 cm from the plate In the nose-chin position, rays passing through the maxillary sinus first pass through the middle fossa of the skull above the petrous processes of the temporal, and below the lesser wings of the sphenoid Projected within the shadow of the maxillary sinus, and near the nasal wall, may frequently be seen the foramina, affording exit for the optic and the three divisions of the fifth nerves, especially the foramina rotunda, and ovalia lying more latterly, and being the more easily outlined in the normal sinus

The nose-forehead position is ill suited for the maxillary sinus, as in it the petrous processes are projected across the antrum often with such density of shadow as completely to obscure the details, mislead the interpreter, and simulate a pathologic condition of the sinuses This position is perhaps the better routine method for the frontal sinus, especially if an exact outline of the upper limits of the sinus is desired, and provided that the principal rays are directed from a position sufficiently forward to bring the lesser wings of the sphenoid below the superciliary ridge It is not so well adapted for the outline of the orbital extensions of the frontals and the anterior ethmoid cells as is the nose-chin position, because of the shadows of the lesser wings of the sphenoid, and the base of the anterior fossa

TRANSILLUMINATION

The value of transillumination depends on the interference which the pathologic contents and thickened mucosa of a diseased sinus offers to transmitted light A perceptible interference to light is shown by uncontaminated mucus, and more by normal mucous membrane, and when the latter becomes swollen and hyperemic, and the sinus filled with mucopus and detritus, especially in chronic infection, a high degree of illumination becomes necessary for translucency

* Read before the Section on Laryngology Otology and Rhinology at the Seventy First Annual Session of the American Medical Association New Orlean April 1920

1 Waters and Waldron Am J Roentgenol 7 633 (Feb) 1915

Since we are concerned with the light interference caused by the diseased processes in the sinus cavity alone, it is highly important that the light, before entering and after passing out of the cavity, should encounter as little interference from extraneous bone and soft tissue as possible, and to this end I wish to describe a method of transilluminating the maxillary sinus which I have used with gratifying results for eleven years, namely an orbitopalatobuccal route of transillumination The advantages claimed over the palatofacial, or Heryng method are

1 The light passes through less extraneous (to the sinus) tissue

2 It passes through opposite instead of adjacent sides of the sinus, and, therefore, penetrates deeper into the cavity

3 It takes less time

4 It is more cleanly

AUTHOR'S METHOD

The patient is placed on a high stool in a dark room, and is requested to tilt the head backward and open the mouth The cheek is retracted with a tongue depressor so as to bring into view not only the hard palate, but also that part of the floor of the antrum in the buccal cavity outside and above the molars

The light is placed against the lower lid above the infra-orbital notch, pushed inward, and pointed downward until the infra-orbital ridge is well passed, when an area of pink will be seen on that part of the roof of the mouth and buccal wall on either side of the alveolar process corresponding to the floor of the antrum

That the extraneous tissues in this orbitopalatobuccal method are less extensive and offer less resistance to the light than in the Heryng method is evident after comparing the thickness of the antral walls in the valuable data given by Davis [2] "The orbital wall is a thin plate of bone from 0 5 to 1 5 mm , and the facial from 2 to 5 mm in thickness," or from three to four times as thick as the orbital wall Thus the light passes through only one third as much bone and far less soft tissue in entering the antrum through the orbit in the author's method, as it does in its exist from the antrum through the facial wall in the Heryng method In each case the light passes through the roof of the mouth In the new method there is the added advantage of being able to observe the translucency outside and above the molars, as well as in the roof of the mouth, in fact the entire floor of the sinus where pathologic conditions are most usually found is outlined and transilluminated

ROUTE OF TRANSMITTED LIGHT THROUGH ANTRUM

The popular fallacy in the palatofacial method of Heryng is the presumption that the light passes directly through the antrum As a matter of fact the greater part passes first through the floor of the nostril into the nasal cavity, and then through the lateral nasal wall into the antrum and through the upper inner and interior corner of the antrum, escaping entirely any localized pathologic condition of the sinus lying over the roots of the teeth and outer antral wall, which is the most frequent site of a pathologic condition, especially when the infection is of dental origin Apropos of this, Logan Turner [3] says

With the exception of a very small portion of the outer edge of the palatal plate of the superior maxilla close to the alveolar margin the roof of the mouth forms the floor of the nose, and has no part in the formation of the floor of the antrum, this wall being formed by the alveolar process which bears the teeth The typical floor is over the molars and the posterior portion of the second premolar and in all stages of development is in close relation to the teeth there being always a bony covering over their roots

A further quotation from Turner will help to remind one how far, laterally, the inferior fossæ of the nose extend

> In an antrum of average dimensions the outer border of the latter [canine] ridge indicates externally the line of union between the facial and nasal walls of the cavity When the lamp is placed in the mouth some of the luminous rays enter the maxillary sinus directly, while the remainder pass into the nasal cavities and thus reach the antra through their nasal walls

It is very evident, therefore, that when (as frequently happens) a septal spur or an enlarged inferior turbinate or some other abnormal condition fills the inferior fossa, transillumination by the old method is very materially interfered with, and its interpretation rendered faulty

73 Haywood Street

ABSTRACT OF DISCUSSION

DR JOSEPH C BECK Chicago Dr Briggs demonstrated to me and others the method of transillumination he described One thing in favor of this method is the anatomic reason given for getting the proper transillumination through the antrum direct For the frontal sinus this light is splendid It is the only one I have seen that is worth anything at all in the diagnosis of frontal sinus lesions In reference to the use of the roentgen ray in the diagnosis of sinus disease or disease of the antrum of Highmore, I am not ready to accept his statement That the plates show a density across the antrum is due to the fact that the horizontal plate of the frontal bone is too high It is true that the malar bones are shown somewhat encroaching on the antrum but when making a plate for all the sinuses you do get the lower portion of the antrum better in the posterior anterior position and that is the part where we are looking for trouble because the upper part of the antrum is usually masked by the anterior ethmoid cells

DR HENRY C BRIGGS Asheville N C In trying out the many positions for the plate in sinus roentgenography, the one approximating the nose-chin position offered the fewest disadvantages and the most advantages In almost any position there are certain perplexing shadows of normal parts projected on the plate and the most pronounced of these I found to be the petrous portions of the temporal bones and the greater wings of the sphenoid as demonstrated by the slides showing the wires placed over these structures in the skull The nose-chin position allows the projections of these dense shadows to fall one above and the other below the antrum, and the shadows of the greater wings of the sphenoid falling across the orbits do not interfere with the projection of the frontals In this position the outlines of the frontals are well projected and what is equally desirable it shows the orbital extensions of the frontals as will no other position—a matter of great importance to the operator especially in the radical operation

2 Davis W B Anatomy of Nasal Accessory Sinuses Ann Otol, Rhinol & Laryngol 27 940 (Sept.) 1918

3 Turner Logan Accessory Nasal Sinuses 1901

Malformation of Hands and Feet.—Muñoverro and Brave Frias give an illustrated description in the newly founded *Revista Española de Cirugia* **1** 73 1919 of the case of a girl now 6 years old whose [illegible] foot are symmetrical slit to the wrist or [illegible] foot ne[illegible] tarsus The par[illegible] two or three fing[illegible] as also the middl[illegible]

INDIFFERENCE OF THE LARYNGOLOGIST TOWARD TUBERCULOUS LARYNGITIS

AND THE TUBERCULOSIS PROBLEM *

WILLIAM V MULLIN, M D
COLORADO SPRINGS, COLO

No one, I am sure, will deny that tuberculosis is a medical problem of great importance It would only be necessary to look over the history of tuberculosis in the United States Army in order to confirm this statement While immunity and resistance influence the prognosis of this disease, by far the greatest aid in the solution of this difficult problem is early diagnosis What are we as laryngologists doing to assist in this solution? Are we aiding in the early diagnosis and giving the proper advice to the persons affected?

Laënnec,[1] in 1819, first described the formation of ulcers in the larynx, due to the breaking down of little tubercles, Louis, in 1825, laid stress on the direct action of sputum from phthisical lungs as a cause of tuberculosis of the larynx, and also stated that the posterior wall was the most often affected, Trousseau and Belloc, in 1837, differentiated cancerous, syphilitic and tuberculous ulcerations, but prior to this date they had all been grouped as laryngeal phthisis, Rheiner,[2] in 1853, stated that the predilection of the disease for certain parts might be due to the delicacy of the epithelium in such situations And yet the principle of the laryngoscope was not discovered until 1854, thirty-five years after Laennec first described the condition of laryngeal tuberculous ulcerations Krause, in 1885, introduced treatment by lactic acid, and Heryng, in 1887, demonstrated a case healed by the use of curets and lactic acid These facts make us realize how little has been added to the early observations by later laryngologists

As to the frequency of tuberculous laryngitis in persons having pulmonary tuberculosis, statistics vary all the way from 5 to 85 per cent This discrepancy is doubtless due to lack of uniformity in arriving at the diagnosis It is my own belief that the higher figure is the one nearer the truth, and that tuberculous laryngitis is a more frequent complication than is generally supposed The diagnosis of incipient laryngeal tuberculosis is not an easy matter As St Clair Thomson so well puts it, diagnosis depends on the "skilled eye of the diagnostician" This eye might be compared to the trained ear of the chest man, and it can be acquired only by the examination of a great number of larynges in all stages After such well known pictures as pear-shaped swelling of the arytenoids and typical tuberculous ulcerations, the diagnosis is not difficult Meyer,[3] in his histologic examination of the larynx of tuberculosis patients, in whom no laryngeal changes were observed during life, was able to demonstrate histologically tuberculosis in the laryngeal tissues in five out of six of such cases Von Ruck, in a series of 309 cases, found laryngeal tuberculosis present by inspection in 182, or 58 per cent, and he determined by focal reaction that eighty-four other larynges were affected, bringing the total to 86 per cent, or 28 per cent additional

All due credit should be given to such writers as Wright and Smith, Phillips, Lake Lockard, Kloebs, and many others, yet the literature of this disease is scanty in proportion to, and in comparison with, the literature of other diseases Think, for instance, of the exhaustive works on the blood, on surgery of special parts, and on malignancy, as compared with what has been written on tuberculous laryngitis A few years ago the rhinologists combined their efforts and carried on an investigation of ozena At this meeting we are to have the report of the committee on local anesthesia Can we not in some way have similar joint work on laryngeal tuberculosis? Consider how infrequently the larynx is removed and studied at necropsy, and what a limited amount of histopathologic work has been done on this structure I myself never get over my astonishment at the difference between the appearance of the larynx when viewed postmortem as compared with the image seen in either the direct or the indirect laryngoscope And in making this comparison, I am impressed with the fact that the disease is always more extensive than that which can really be seen in the laryngeal mirror I think no other disease of the larynx is comparable to tuberculosis in this fact, that the image will vary so at different examinations, and that it is difficult to write down just what one sees

What is lacking among laryngologists that should have provoked the title of this paper? One thing is this, that they do not take a more active interest in this disease Some laryngologists have told me that they see very little tuberculous laryngitis in their part of the country, but this means only that they are not making the diagnosis Some are afraid of becoming infected themselves while examining or treating this condition Other men have told me that they do not care to treat this disease, but prefer to send the patients to a sanatorium

ATTITUDE OF SANATORIUMS

Let us see what the situation is at our sanatoriums throughout the country A questionnaire was sent to all the tuberculosis sanatoriums listed in the directory published by the National Association for the Study and Prevention of Tuberculosis To the question, "Do you accept cases, if known, of laryngeal tuberculosis at your institution?" 21 per cent answered, "No" To the question, "Do you have a trained laryngologist in attendance?" 61 per cent answered in the negative To the third question, "Are all your cases given a systematic routine examination of the ear, nose and larynx on admission, and at certain stated intervals during their residence?" 35 per cent replied that they did not, and some volunteered the information that they had this examination made only when symptoms demanded it To the last question, "Is this examination made by a laryngologist, or by the regular chest man in attendance?" 26 per cent answered that they were made by a laryngologist, and 74 per cent that they were made by the chest man Some of the additional replies to this question were amusing, and I will give one example "I can see no reason why a trained laryngologist should be in a tuberculous sanatorium The attending

* Read before the Section on Laryngology Otology and Rhinology at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 This brief review of the early history of tuberculous laryngitis is taken from Lake R Laryngeal Phthisis or Consumption of the Throat London 1901

2 Rheiner H Ueber den Ulcerationsprozess im Kehlkopf Virchows Arch f path Anat 5 534 579 1853

3 Meyer A Beitrage zur Pathologie der Larynx Tuberculose Virchows Arch f path Anat 165 498 503 1901

physician gets an immense amount of experience covering this kind of work and is as well fitted to treat these cases as a laryngologist"

My deductions derived from the answers to these questions are as follows The sanatoriums constituting the 21 per cent which do not admit known cases of laryngeal tuberculosis are adding to the number of patients (already too large) who are endeavoring to seek recovery from tuberculosis of the throat by going to the private office of the physician or to the free dispensaries, whereas, if they are to gain any results at all, they should be in bed carrying out the absolute rest cure We do not leave the diagnosis and treatment of our ear cases, sinus conditions, or other diseases of the larynx, to a general man, so why leave to him laryngeal tuberculosis? In a series of cases of laryngeal tuberculosis studied by Dworetzky,[4] 35 per cent either had no symptoms referable to the larynx, or else these were very slight and could be easily attributed to other causes The influence of diseased conditions of the upper respiratory tract on the larynx is too well known for comment, except to add that in tuberculous patients (the majority of them in bed and with high temperature), the greatest care should be taken to rule out and prevent every irritation from above, thereby greatly lessening cough and preventing complications

As for the 74 per cent of sanatoriums in which patients are not examined by a competent laryngologist, I fear that in these institutions the chances for making a diagnosis of early infiltrations in the larynx are greatly lessened If we wish a conception of the magnitude of the problem in the country as a whole, we must add to the patients in these sanatoriums the great unknown number without competent examination scattered throughout the country Dworetzky classified his cases in a way that I like very much, namely, acute, subacute and chronic, and I think that more effort should be made to do this when making a diagnosis Casselberry, writing some years ago, spoke of the resistant and nonresistant types

At Farmingdale, N J, there is a tuberculosis preventorium This institution cares for the children of tuberculous parents By competent and routine examination of all cases of tuberculosis, a certain number might be put in a "preventorium class," where tuberculous patients with frequent attacks of acute and catarrhal laryngitis would be watched more closely and warned and advised regarding future possibilities Some may question this procedure on the grounds of insufficient time, but on the other hand, think of the amount of time consumed, with so little reward, in treating one advanced case of laryngeal tuberculosis with perhaps painful deglutition, and then think what the result would be if the same amount of time were given to a number of incipient cases

I believe that the men doing tuberculosis work are looking to the laryngologists for some definite ideas on this disease, and I do not believe that we are giving them the aid they should have In a reprint entitled, "Standards for Diagnosis, Classification and Treatment of Tuberculosis in Children and Adults," prepared for the Framingham community health and tuberculosis demonstration, all the diagnostic points in regard to the chest are well covered, but the only advice relative to the throat is "Any hoarseness or persistent huskiness requires investigation" This is good advice, but it is not enough Fishberg says that in his experience local treatment is not often effective in enhancing cicatrization of laryngeal lesions and that when carried out vigorously it is liable to do harm Farther on in the same chapter, he says that there is one form of the disease in which unlimited use of the voice is advisable, and that is where only the cords are affected He then reproduces an illustration of a very advanced and distorted tuberculous larynx I wonder whether most laryngologists dealing with tuberculosis will not agree with me that local treatment is effective, and I certainly believe that we should be able to judge and standardize our treatment in such a way that it would not be so vigorous as to cause damage I am convinced that, without some modification, the statement in a textbook recommending unlimited use of the voice in laryngeal tuberculosis tends to create dangerous notions, and hence harmful practices

CONCLUSIONS

1 A more active interest in tuberculosis should be taken by laryngologists

2 There should be more thorough and uniform teaching of the diagnosis of this disease, and it should be carried on in such a way that the student will have opportunity to examine large numbers of incipient cases, and to see these repeatedly and thus familiarize himself with the laryngeal image seen in tuberculosis as compared with that found in other allied conditions

3 I hope that a committee of laryngologists representing the various laryngologic societies may be formed to meet with a committee from the National Association for the Study and Prevention of Tuberculosis for the purpose of standardizing the literature and teaching of this subject, and with the further object of stimulating clinical investigations and pathologic research concerning this condition

317 Burns Building

ABSTRACT OF DISCUSSION

DR JOHN B MCMURRAY, Washington Pa I had the larynx removed postmortem from a series of cases in fifty of which or 60 per cent the diagnosis was made antemortem, 20 per cent showed gross pathologic lesions at the time of necropsy, and 20 per cent did not show any lesions at all at necropsy As Dr Mullin stated, in all the cases in which the diagnosis was made antemortem we were surprised at the extent of the lesion found postmortem compared with the description of the case antemortem Every one of the ten cases which did not show lesions at necropsy were found to be tuberculous on microscopic examination These lesions were practically all situated in the posterior wall and lateralward from the ventricle. Just what the early signs are has not been settled definitely There must be some reaction of the tissues to the early invasion of the infection Meyer in his work on experimental tuberculosis showed that there was a certain amount of edema or swelling of the mucosa We had a series of cases last year in which there was a submucosal edema of the posterior wall of the larynx.

Believing that it might be possible to make a diagnosis of beginning tuberculous laryngitis with the roentgen ray we began a series of experiments first with taking known cases of tuberculous laryngitis We made stereoscopic plates In every case we were able to show densities on the plate corresponding to the lesions in the [illegible]tion of the epiglottis or other structures was [illegible]nchnical

4 Dworetzky Julius The Diagnosis of Tuberculous Laryngitis J A M A 69 619 623 (Aug 25) 1917

5 Fishberg Maurice Pulmonary Tuberculosis Philadelphia & Febiger 1916 chapter on laryngeal

types, cases that do not show lesions visible with the laryngoscope, densities appeared that we believed were tuberculous We cannot prove that, however, as we could not get the larynges from these cases for microscopic examination Two difficulties are encountered in this work One is the difficulty of getting a good position The position we found most satisfactory was to put the target of the instrument midway between the anterior and posterior walls and take the first picture with the instrument thirty millimeters upward and the second with the instrument sixty millimeters down from this central point Dr Mullin emphasized the fact that we should try to get these cases early Unquestionably, in any case of pulmonary tuberculosis in which there is positive sputum, there is danger of involvement of the larynx I believe in direct infection of the larynx The larynx should be examined frequently and carefully One never knows when these cases will begin to ulcerate Put the patient under preventive treatment early to avoid the distress and pain that accompany advanced cases of tuberculous laryngitis

DR JOSEPH A STUCKY, Lexington, Ky In the last six months I have been much surprised to find that in every case in which there was any ear trouble, whether a catarrhal or a suppurative condition, or when there was pharyngeal or tonsil disease, or anything that lowered the resistance of the patient, there were marked results from the removal of the cause and rapid improvement in the pulmonary condition I have been surprised at the number of cases of ear trouble and beginning laryngeal trouble with no symptoms until attention was directed to them These conditions were found by making careful, complete examinations in each case on admission I believe we are liable to do harm by using the average local treatment, a direct spray in the larynx, when there is a tickling cough Local treatment should be as nonirritating as possible Of course, when there is broken down tissue and painful deglutition we have another problem and efforts should be made to relieve this as rapidly as possible by topical applications

DR THOMAS E CARMODY Denver Those of us who live in the West have seen many of these cases The sanatoriums are taking care of them In U S Army General Hospital No 21 we examined probably 3 000 men Of the known cases of tuberculosis of the lungs laryngeal involvement was present in 95 per cent There has been a difference of opinion among laryngologists as to what constitutes tuberculous laryngitis Many cases of tuberculous laryngitis are not diagnosed clinically Lake's work has proved this also Lockard's As to the fear of infection if we accept the present ideas regarding tuberculosis, there is none for we all have had tuberculosis in some form—probably healed before we became laryngologists Dr Mullin spoke of submucosal edema I have seen it for years and am glad to have a name for it The cases I have seen postmortem prove that the involvement of the larynx was much higher than we expected from the physical examination We treat late stages mostly but I agree with Dr Mullin that we should devote our efforts to the early stages and the prevention of ulceration We cannot prevent tuberculous laryngitis, but we can prevent the breaking down of the tissues The roentgen ray is of great value in diagnosis

DR CULLEN F WELTY, San Francisco I agree with Dr Stucky I saw a case in which there was extensive ethmoid suppuration on both sides The patient was supposed to be tuberculous, but she gained twenty pounds after the ethmoid suppuration was cured Nothing has been said about what to do with this larynx How are you going to take care of a tuberculous infection in the larynx of a patient who has fever with no chance of recovery, with great difficulty in swallowing and coughing all the time? Nothing has been said about injecting the superior laryngeal nerve with alcohol or about resecting it I can recommend these procedures most highly Then there is another class of patients, those that are quiet, the lung condition is quiet, no temperature elevation at all We operate to cure such patients Remove the tissue and curet the bone These are the patients that get well Laryngitis patients do not get well without operation Sprays and such things in the larynx are of no consequence whatsoever, except, possibly, in a palliative way

DR C H MCCASKEY, Indianapolis There is just one way to treat a patient with tuberculous laryngitis Put the patient to bed and keep him or her quiet Relative to the painful cases, it is all right to inject the superior laryngeal nerve, but that causes pain There is a better way described by Blumental of Berlin, which is to resect a portion of the superior laryngeal nerve, and the patient is happy

DR WILLIAM V MULLIN, Colorado Springs, Colo There is nothing in my paper on the treatment of tuberculous laryngitis, therefore I will not reply to any of the discussion regarding treatment Dr McMurray is an example of a type of laryngologist who is living in a community in which he is not supposed to see much tuberculous laryngitis, yet who is seeing it all the time The roentgen ray is not of value in cases in which there is manifest tuberculous laryngitis But try it in the cases with tuberculosis elsewhere in the body and in which you do not find anything in the larynx on laryngoscopic examination In the service we roentgenographed a great number of detachment men who were supposedly healthy, and in those we found no densities in the larynx Then we roentgenographed a number of men who had pulmonary tuberculosis who were raising sputum but without manifest findings in the laryngeal mirror We found these shadows and felt they must be tuberculous Repeated attacks of laryngitis in the tuberculous occur commonly I believe this is a flare-up of tuberculous deposits well down in the tissues which are not seen by the laryngeal examination Dr Stucky emphasized an important point of clearing up other infection of the upper respiratory tract I agree with him that too vigorous applications may do harm Most of our medication outside of operative procedure, is carried on by using an intratracheal syringe

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SOAPS IN RELATION TO THEIR USE FOR HAND WASHING*

JOHN F NORTON, PH D
CHICAGO

The public is asked to buy many things of a fraudulent nature, or concerning which fraudulent claims are made by the manufacturers or their agents We are all familiar with the history of foods in the last twenty years and the great advance that has occurred since the passage of the Food and Drugs Act in 1906, in protecting the gullible public This law and various amendments made an attempt to regulate a far greater evil than adulterated foods, i e, the ubiquitous patent medicines At the present time a manufacturer must not make "false or misleading" statements concerning the composition of his medicine and must not make curative claims which are "false or fraudulent", but this applies only to the package in which the medicine is sold and not to circulars or newspaper advertisements apart from the package He must also declare the presence and amount of eleven specified drugs Closely allied to the "patent medicines" are the varieties of "healing," "antiseptic" and "germicidal" soaps, accompanied too often with claims of their value which to my mind have been neither proved nor disproved I will cite two instances from the soaps with which we have been working for the last two years

* From the Department of Hygiene and Bacteriology, University of Chicago

I have been aided in this work by Mrs E O Jordan Mr J E Gordon Mr T T Crooks and Mr H M Weeter to whom thanks are due

* This investigation was made with the assistance of a grant from the Committee on Therapeutic Research Council on Pharmacy and Chemistry American Medical Association

1 "May be used as a general antiseptic for wound cleansing, for washing sores, ulcers, *including cancerous infections* [italics in these quotations are mine]

Useful for offensive odors about the body, *for bathing in contagion* and for many diseases of the skin"

2 "*Chemical* tests have shown that bacteria and germ life exist on ordinary soap, but that no germ life and bacteria can exist on Not only will the soap itself remain sterile but when rubbed over the body *in the usual manner of washing the skin is rendered sterile,* thus acting as a safeguard"

TABLE 1—ORGANISMS FOUND BY CUMMING

Number	Condition	Organisms	Per Cent Positive
340	Carrier	Streptococcus hemolyticus	37
40	Patients	Pneumococcus	15
95	Patients	B diphtheriae	6
	Carriers	Streptococcus viridans	100
78	Patients	B tuberculosis	2

Other soaps are frankly advertised as antiseptic or germicidal, and many certainly convey to the buyer the impression that they are excellent means of killing the harmful germs which may be present on the skin when the soaps are used, as in the claim just quoted, "in the usual manner of washing"

There are several features connected with buying and using soaps One is perhaps more economic than hygienic, i e, should the public be asked to pay 30 or 35 cents for a special kind of soap unless it really possesses properties which make it more valuable than those selling for 12 or 7 cents? But far more important are the specific hygienic claims made for certain soaps Are they frauds or do they really possess, for example, germicidal properties which really aid in the prevention of the spread of disease? Can the public depend on them or do they foster a false sense of security? It is certainly important to examine the basis on which these claims are made Let us take, for example, the bactericidal properties Whatever variety of tests have been made in the manufacturers' laboratories, for the buyer there is only one guide the statement which is sometimes on the package concerning the phenol coefficient" value I think it may be admitted that soap solutions in *sufficient concentration* are antiseptic (not necessarily germicidal) In addition, many soaps contain such substances as cresols, which are known to be bactericides under the proper conditions Hamilton [1] has stated that "no soap can be considered an effective disinfectant unless associated with some other more active agent" But this statement is thus qualified later in the same article "Most disinfectants with the exception of potassium mercuric iodid add little to the efficiency of soap" referring to disinfecting properties Is the "phenol coefficient" a proper means of measuring the value of soaps when used" in the usual manner of washing"? I think not, because of the great difference in conditions which exist in the laboratory tests and in the actual use of the soaps We have no adequate tests and, indeed, a search of the literature reveals that almost no attempts at such tests have been made

First, let us consider the necessity for removing bacteria from the surface of the body and particularly from the hands Various considerations point to such a necessity and to the hands as vehicles in the transmission of infectious diseases Transference of typhoid and paratyphoid bacilli from patients, convalescents and carriers to food can most easily be conceived as taking place by way of the hands Material from the nose, as in colds, or from the mouth, as in diphtheria (or with diphtheria carriers), may be taken from the hands and conveyed to the hands of others either directly or by means of such objects as door handles or dishes or books, and thence will reach the mouth of a normal person and may infect him Cumming [2] believes that the major part of the transmission of respiratory diseases is due to hand infection His conclusions are drawn from such data as these Of groups comprising more than 66,000 officers and men in the army, about half washed their mess-kits in tepid water in barrels, the common property of each organization The other half used table ware Among the first group the influenza rate was 252 per thousand, in the second group only 51 1 per thousand These results are explained by Cumming as due to the conveyance of the virus to the tepid water by the hands, the germs then being picked up on the hands of another individual and hence passing to the mouth either directly or indirectly In another study [3] on the incidence of pneumonia in institutions, it was found that this incidence was three times as high where hand-washed eating utensils were used than in those in which there were machine washers Whether or not the interpretation of these results is wholly correct, the figures certainly serve to indicate the importance of the hands as a possible means of transmitting disease

If the hands are so important, it ought to be possible to find on them pathogenic bacteria or associated organisms Many studies have been made on the flora of the skin, but most of them were concerned with normal forms as staphylococci, rather than with those foreign organisms which are temporarily present on the outer surface and would be most easily removed In attempting to establish experimentally the possibility of typhoid infection by way of the hands, Winslow,[4] more than fifteen years ago, made a search for *B coli* on the hands of 111 individuals

TABLE 2—RESULTS REPORTED BY WEAVER

Number of Persons	Number of Cultures	Status of Persons	Percentage Positive: B Diphtheriae	Percentage Positive: Streptococcus Hemolyticus
45	268	Pupil nurses	3 0	9.3
4	51	Graduate nurses	0 0	2 0
8	45	Interns	6 7	15 6
4	64	Diet maids	0 0	3 1
1	18	Orderly	0 0	22 0
		Laundry and office help	0 0	0 0

and found typical organisms present in ten instances Cumming,[5] in the course of the experiments already referred to, found the organisms named in Table 1

Weaver [6] has recently reported results obtained on hospital attendants in which two organisms were sought *B diphtheriae* and *Streptococcus hemolyticus*

Barron and Bigelow [7] found *B diphtheriae* in 16 1 per cent of cultures from the hands of diphtheria

1 Hamilton H C Am J Pub Health 7 282 (March) 1917

2 Lynch C and Cumming J C Am J Pub Health 0 25 (Jan) 1919
Cumming J G Ibid 9 414 (June) 1919

3 Cumming J G Am J Pub Health 0 849 (Nov) 1919

4 Winslow J M Rec 10 463-471 1901 1904

5 Cumming J G Am J Pub Health 9 417 (Jun) 1919

6 Weaver G H and Murchie J T Contam in of the Hands and Other Objects in the Spread c A M A 73 1921 (Dec 27) 1919

7 Barron M and Bigelow J Inf 30

patients and carriers who were not masked Some years ago, Cummins[8] reported the isolation of typhoid bacilli from the hands of carriers Since not all of the organisms mentioned in these experiments can be regarded as part of the normal flora of the hands, and were obtained by swabbing (Weaver) or washing in sterile water (Winslow), it is easy to see that with sufficient care of the hands, conveyance of infection could doubtless be decreased This care, of course, consists mainly in adequate hand washing

It is of some importance, therefore, to know the value of various soaps in removing bacteria, in the

TABLE 3—BACTERIA REMOVED FROM THE HANDS

Soap	Number of Tests	Wash Water	First Rinse Water	Second Rinse Water	Total
A	26	1 600 000	1 000 000	865 000	3 000 000
B	22	1 670 000	2 270 000	1 970 000	5 860 000
C	18	79 000	73 500	149 000	201 500
D	13	790 000	420 000	570 000	1 730 000
E	1	19,500	24 500	†	
F	2	122 000	133 000	49 000	304 000
G	4	14 000	32 000	10 000	404 000
H	2	19 000	880 000	904 000	1 803 000

* This series contained one very high count

destruction of bacteria removed and in killing any bacteria remaining on the hands It seems to us that this could best be done by studies on hands as we found them rather than by artificially added foreign organisms The literature of soaps is enormous From a bacterial standpoint, the disinfecting properties of soap are of particular interest, but nearly all reports found deal either with the chemical constituents of soaps or with determinations of germicidal value of soap solutions according to methods comparable to those used in determining the phenol coefficient,[9] which, as has already been pointed out, are not done under conditions similar to those of actual hand washing The only experiments of the latter kind are those reported in 1899 by Symes[10] He tried the usual tests on cultures of bacteria in suspension, and concluded that "for practical purposes most of the so-called disinfectant soaps have no value, but in the combination of biniodid of mercury with soap we have a useful means of disinfecting hands, instruments, etc" Symes also tried hand washing experiments, but did not succeed in sterilizing the hands by this method even with mercuric iodid soap No details of these experiments are given

In our experiments we have tried to determine four things First, the relative efficiency of various soaps in removing bacteria from the hands For this a standard procedure was devised and a large number of tests were made, since the comparison of results from single instances not made in any uniform way would be valueless Second, the relative germicidal power of the soap solutions obtained in washing toward bacteria removed from the hands Third, the bacterial condition of the hands after washing, i e, whether sterile or not Fourth, the effect of the soap, if any, remaining on the hands, comparing the action of different soaps in this respect.

In the experiments we used in all twelve soaps, varying from the cheapest toilet soaps to the expensive so-called antiseptic and germicidal soaps These were picked at random from those on sale at retail drug stores The experiments were made during various seasons of the year on students and members of the staff of the laboratory who were called from their regular work without previous warning No seasonal differences were noted In all the work the hands were washed in sterile distilled water at 40 C in sterile pans The number of bacteria was determined by plating on nutrient agar (reaction + 1 to phenolphthalein), and the plates were counted after twenty-four hours' incubation at 37 C In order to work out some standard procedure, a long series of preliminary experiments was made in which conditions and numbers of washings and rinsings were varied For example, it was found that wiping the hands on a sterile towel between washing and rinsing or between two rinsings resulted in an increased removal of bacteria in the final rinse The use of a towel was therefore abandoned Tests were also made to determine the maximum number of bacteria which could be removed by successive washings and rinsings This number varied from 24,000 to 7,000,000 in six tests with six successive washings and rinsings The average number of bacteria found in the last rinse water was 232,000—in one case 745,000 We can therefore conclude that it is impossible to obtain sterile hands in the ordinary process of washing These results were confirmed by later work, done, however, for a somewhat different purpose The procedure finally adopted was as follows Hands are washed by the subject for one minute with soap in 500 c c of sterile distilled water at 40 C in a sterile pan According to trials, the time, one minute, is rather longer than is customarily spent in washing The hands are immediately rinsed in sterile distilled water under the same conditions, and this rinsing is repeated The wash water and rinse waters are then immediately plated to determine their bacterial content Table 3 gives the average total bacteria removed from the hands according to the foregoing procedure The variation in the number of bacteria in the different

TABLE 4—BACTERIAL COUNTS

Number	Original Wash	1 Hour	3 Hours	5 Hours
1	1 380 000	2 460 000	1 360 000	1 385 000
2	179 000	143 000	136 000	137 000
3	560 000	181 000	153 000	168.000
4	74 000	71 000	82 000	108 000
5	350 000	1 090 000	110 000	163 000
6	30 000	0	0	0
7	0	19 500	7 500	0
8	24 000	36 000	48 000	4 500
9	2 000	4 500	3 500	2 000
10	23 000	17 500	56 000	19 000

tests was tremendous In one series of twelve tests with the same soap, the lowest number obtained in the wash water was 60,000, and the highest, 8,445,000

Of these eight soaps, A and B are well known toilet soaps, D is a green soap such as is used in hospitals, and the others are special soaps supposed to have particular powers with respect to killing bacteria The ordinary toilet soaps appear to have removed the greatest number of bacteria in the wash water, although the differences are not so marked in the rinse waters and totals There are two explanations One is that the special soaps have killed the bacteria or at least inhibited their growth so that they do not appear on the plates, and the other is that the ordinary toilet soaps actually have a greater cleansing power

8 Cummins cited by Richardson Bull State Board of Health of Massachusetts 3 129 1914

9 Work of this kind is reported by Konradi Arch f Hyg 44 101 112, 1902 Rodet Compt rend Soc de biol 63 264 266 1905 Rasp Ztschr f Hyg u Infektionskrankh 58 45 63, 1907

10 Symes Bristol M & Chir J 17 193 197 1899

It is certain that, with the soaps we used, a good lather is more easily obtained with the latter It appears also that the larger number of bacteria in the first rinse water from the special soaps, in comparison with the number obtained in the wash water, might be explained by the difference in cleansing power, and leads us to doubt the germicidal action However, these points needed further investigation

The possible disinfecting or antiseptic properties of the special soaps were tested in two ways The first method consisted in allowing the wash water to stand protected and the bacterial content determined after varying periods of time This ought to give an indication as to the germicidal action of these soap solutions toward the bacteria found on the hands Table

TABLE 5—GROWTH AFTER INCREASED INCUBATION

	24 Hour Incubation	48 Hour Incubation
Wash water	0	19 ,00
Rinse water	0	24 500

4 gives the bacterial counts as obtained from the original wash water and after this has stood for one, three and five hours Experiments 1 to 5 are with ordinary toilet soaps, Experiments 6 to 10, with special soaps Experiments 6 and 7 are with the same soap These results show that for practical purposes the germicidal and antiseptic powers of the special soaps as well as of ordinary toilet soaps, in solutions as obtained in hand washing, are too small to be of any use With two soaps containing mercuric iodid (probably potassium mercuric iodid, as this is the soluble compound), we were unable to obtain growths on our plates in twenty-four hours in all instances, either from the wash water immediately after use or after long standing If the agar plates were allowed to incubate for forty-eight hours, growth was invariably obtained These soaps apparently exhibited, particularly the one containing the larger amount of mercuric iodid, some germicidal and certainly marked antiseptic properties An instance of growth after increased incubation is given in Table 5 The concentration of soap in the agar plates carried over from the wash water was about 0 05 per cent, in those from the rinse water about 0 001 per cent This would mean that with 2 per cent of mercuric iodid in the soap, 0 002 per cent of mercuric iodid was sufficient to retard bacterial growth

That the soap solutions may fairly be compared was shown by determinations of the amount of soap actually used in washing, which, although different persons and different soaps were used, gave figures within reasonably narrow limits The amount of soap in solution was determined by titrating with standard acid and reading from a plot the amount of soap corresponding to the titer The plots were made by weighing out various quantities of the soap as bought, dissolving in water and titrating Straight lines (within the limits tested) were obtained in every case, but the slope of the line varied with the kind of soap The amount of soap used in hand washing under the conditions previously described varied in twelve tests between 2 and 5 1 gm, averaging 2 8 gm This corresponds to a concentration of 0 5 per cent

But in washing, the hands not only come in contact with the soap solution but also are rubbed with lather in which the concentration of soap is much greater Furthermore, a small amount of the soap or its ingredients may be left on the hands In order to get the effect of these factors, the hands were allowed to dry for five minutes after washing and were then rinsed in running sterilized distilled water, and the number of bacteria washed off was determined This was done with a series of ten soaps all of which were supposed to possess antiseptic or germicidal qualities In Table 6 the first column gives the bacterial content of the first rinse water from a series of experiments done as previously described i e, the hands were rinsed immediately after washing The second column gives the figures from a series in which the hands were allowed to dry five minutes before rinsing

These figures demonstrate that the soap remaining on the hands after washing has no germicidal action The difference in the average figures is well within the limits of error of the work

In this connection the amount of soap in the rinse water was determined as an index of the amount of soap left on the hands after washing This proved to be about 2 per cent of the amount of soap actually used or, on the average, 0 05 gm

The same difficulty in obtaining growths of bacteria with soaps containing mercuric iodid was observed in these experiments as in the previous ones, and such growths (except in one instance) were obtained only after forty-eight hours' incubation These soaps again exhibited distinct inhibitive properties

CONCLUSIONS

Sterile hands are not obtained in the ordinary process of hand washing More bacteria were found to be removed by the ordinary toilet soaps than by the special soaps In other words, the cleansing properties of a soap are more important than its "germicidal" or "antiseptic" constituents

The soap solutions obtained in hand washing are of no practical germicidal or antiseptic value

TABLE 6—BACTERIAL CONTENT WITH RINSE WATER AFTER DRYING

	Without Drying	After Drying
	580 000	1 ,00
	675 000	64 000
	1 60 000	235 000
	1 000	57 ,00
	1 000	52 ,00
	1 110 000	260,000
	144 000	20 000
	12 500	4 ,00
	72 500	23,500
	220 000	4 000
	40 000	2 030 000
		2 000
		3 000 000
Average	421 000	4 000

* The figures standing oppo ite in the columns have no significance

The soap left on the hands after washing has no germicidal action

In the whole process of hand washing done in the usual manner the special so-called 'germicidal" or "antiseptic soaps exhibit none of these properties Therefore these terms are not proper to use in connection with soaps

Finally since the hands may serve as a medium for the conveyance of bacteria in infectious diseases, it is important to remove these bacteria, and this may be done by the ordinary toilet soaps as effectively if not more so, as by the special brands of so called antiseptic" or germicidal ' soaps

END-RESULT STUDY OF HALLUX VALGUS OPERATIONS

A REPORT OF NINETY SIX CASES AT THE ORTHOPEDIC CLINIC OF MASSACHUSETTS GENERAL HOSPITAL SINCE 1905

HOMER WALDO SPIERS, AB, MD
LOS ANGELES

Operative attempt to relieve the pain and disability accompanying hallux valgus is far from a new procedure Removal of the exostosis, dissection of the bursa, tenotomy and transplantation of the tendons, removal of the sesamoids, partial and complete removal of the head of the metatarsal, and removal of the proximal end of the proximal phalanx, together with numerous combinations of the foregoing, have all been advocated and practiced The influence of such men as the Mayos and J B Murphy being thrown on the side of complete excision of the head, the simplicity of it and the fairly satisfactory results that followed have made this method the most frequent one of choice

One of the many noteworthy lessons that the experience of the Medical Corps of the Army has brought forth is that the present operations in vogue for the relief of this disabling condition did not put the man back in the ranks in a reasonable time prepared to do his full share as a soldier He was still partially disabled after many weeks of convalescence The result was not satisfactory, therefore, to the person who must depend largely on his feet for his livelihood It was with these facts in mind that I undertook the investigation of a series of cases in which operation was performed at the Massachusetts General Hospital over a period of fourteen years

RESULTS

	Cases
Complete excision of the head of the metatarsal	78
Removal of the exostosis only	8
Kellar method	7
Wedge shaped osteotomy	1
Miscellaneous	2
	Years
Average time since operation	4
Average age of patients at operation	36
Youngest	15
Oldest	62
	Per Cent
Satisfied (of the whole series)	64
Dissatisfied (of the whole series)	36
Dissatisfied whose after treatment was unsatisfactory	56
Examiner's report satisfactory	57
Examiner's report unsatisfactory	43

Of the ninety-six patients who answered the questionnaire, sixty-four were examined either by me or by members of the staff of the orthopedic outpatient department The type of the operation was obtained from the case record, the patient's opinion of the results, his postoperative treatment, shoes, plates, etc, and his occupation were secured from the questionnaire The examiner obtained the cosmetic and functional result from the local examination A result was considered satisfactory if the patient could pursue his usual occupation with little or no discomfort It was, of course, unsatisfactory if the accustomed occupation gave foot distress or the condition of the feet necessitated a change of means of livelihood

There were seventy-eight operations classified as excision of the metatarsal head, of these, 61 per cent were satisfactory and the remainder unsatisfactory Of the latter group, 56 per cent had unsatisfactory after-treatment Of this group whose results were not satisfactory, it was found that 70 per cent were compelled to follow occupations that required much standing and walking, working as waiters, policemen, cooks and mechanics and the like Concerning after-treatment, those patients were considered to have had sufficient after-treatment whose feet were properly shod, plated and observed for a reasonable length of time, two or three months The complaints were largely painful transverse arch (metatarsalgia), partial or complete ankylosis, deformity, or a combination of the three The ones who were displeased with the result, with remarkable regularity, expressed themselves, "Since operation my trouble has not been the same It has been different"

There were eight operations performed by removal of the exostosis only Seventy-five per cent were wholly unsatisfactory Two patients expressed themselves as partially satisfied In the seven operations by the Kellar method, all the patients reported satisfaction and the examinations were uniformly good

This end-result study, analyzed as a whole, shows favorable results in about two thirds of the cases There is most surely room for improvement One ought to be able to give a favorable prognosis in better than two out of three of his cases Undoubtedly in private practice a higher percentage of good results is obtained

Complete excision of the head of the metatarsal bone was by far the largest group studied What are the factors that militate against an ideal surgical end-result and lead to disability in this class of cases? First, I think, stands the loss of the foundation of the weight-bearing pillars of the transverse arch of the foot The anterior arch was the trouble maker, metatarsalgia and painful plantar callosities were the most frequent sources of trouble A percentage of these could probably have been avoided by proper long continued after-treatment Correct shoes and properly fitting plates would have helped The latter require a great deal of adjustment, and in the long run are not ideal The longitudinal or posterior arch was less frequently a cause for complaint Secondly, partial ankylosis was the rule in nearly all the unhappy results If the ankylosis was complete, and particularly if the toe was in the cock-up position, the result was most distressing With the loss of joint function and the attendant loss of muscular control came difficulty in propulsion This accounted for some of the painful results Lastly, there was another class of cases in which the roentgen ray had probably revealed the cause of disability The tendency to spur formation at the end of excised bone is well known If this occurs on a weight-bearing surface, we have an evident cause for trouble If it seems reasonable and good surgical judgement to handle with great care the stump in larger bones, where weight bearing is to be anticipated, it surely is important to consider this a source of possible trouble, in the removal of such weight-bearing pillars as the metatarsal heads From the appearance of the roentgenograms, it would seem that this detail has been somewhat neglected It should be added to the thorough technic of excision, in my opinion

The second group of operations, that of removal of the exostosis only, with or without the so-called bursa, need not occupy our attention long The post-

REPORT OF CASE

W, a soldier, was evacuated to the Belgian military hospital Villiers-le-Sec (Calvados), a base hospital attached to the field hospital of Beveren-sur-Yser, with a wound of the abdomen in a convalescent stage The clinical history revealed that a month before he had been admitted to the hospital of Beveren, where he had been operated on by Dr Derache for a penetrating shell wound of the right lobe of the liver with laceration of the lower part of the liver The fragment was buried in the parenchyma of the liver, this was extracted, the liver was sutured and packed with a tampon of iodoform gauze, and the wound was closed The postoperative course was normal, the tampon was removed on the sixth day, and the soldier was evacuated after three weeks in a fair way to recovery On his entry into the base hospital, his condition was very satisfactory Local examination disclosed a cicatrice about 12 cm long, along the external border of the great right lobe, in the center of which there was a discharging fistula, the discharge was blood stained The dressings were renewed every other day, and each time blood was detected on the gauze Eight days after admission to the base hospital there was a slight hemorrhage, more abundant than usual, from the fistula, but no importance was attached to the occurrence Several days later a profuse hemorrhage saturated the dressing, and the soldier called this to the attention of the physician on duty The latter applied a tampon in the fistula On the succeeding days there was relative calm the dressings were always stained with blood The hemorrhage apparently occurred with greater frequency, and as retention of a shell fragment in the liver was suspected, a roentgenogram was made, with negative result As the symptoms continued, the tract was explored with a stylet, on the theory that it concealed some foreign body not opaque to the roentgen ray Nothing was accomplished except renewal of the hemorrhage, which could be arrested only by a tampon The bleeding continued and the general condition of the patient grew worse One month after admission a blood count revealed 3,800,000 red cells, and the patient was almost colorless, the mucous membranes were pale A second count ten days later, gave 3,200,000 red cells and hemoglobin 60 per cent The patient felt weak The discharge from the fistula was always bloody, and never contained clots It did not seem that hemophilia could be at the bottom of the trouble, as the patient had undergone a major operation without postoperative hemorrhage From the median vein of the arm a sample (2 c c) of blood was taken in order to compare the coagulation time with that for a normal person Morawitz's method being used, a difference of one minute was noted, not characteristic of hemophilia The same was noticed in comparing the bleeding time with that for normal subjects Bleeding after puncture of the ear lobule continued for some moments and stopped as quickly as in the normal subject As the symptoms became aggravated it was decided to undertake homohemotherapy as recommended by Sicard This simple procedure is not in the nature of a transfusion It consists simply in taking blood from a healthy subject, about 100 or 150 c c being obtained from a vein of the arm The blood is aspirated into a syringe and is immediately injected under the skin of the patient at some point where the skin is fairly loose, as over the abdominal region In the case here reported, the injection was repeated after eight days A local hematoma formed, but was resorbed in ten days On the day following each injection the temperature rose very slightly (38 2 C and 37 9 C) but no other general symptom developed On the contrary, there was local improvement After ten days the discharge from the fistula had diminished considerably, and by the fifteenth day the fistula had dried up and the operation scar completely healed One month later the general condition of the patient was normal, and all signs of anemia had disappeared

COMMENT

It would be rash to call this condition acquired hemophilia, because there was no incoagulability of the blood Nevertheless, there is in this term an element of truth, for it was really a local hemophilia, strictly limited to the region of the wound This hemophilia in the liver region kept the fistula open by the incessant hemorrhages which it provoked On the basis of the few observations made on this wounded soldier, it is not possible to do more than formulate some hypotheses It is necessary, first of all, to bear in mind one physiologic fact When the general circulation of a dog is restricted by excluding the intestinal and hepatic areas, the blood becomes incoagulable Moreover, in Nolf's theory of blood coagulation, one of the three colloids necessary for coagulation, the thrombozyme, comes from the blood vessel walls The others, fibrinogen and thrombogen, are formed in the liver In the case under consideration, did not the wound of the liver alter the hepatic tissue in this definite respect, that the parenchymatous portion no longer produced the colloids indispensable to coagulation? Hence the frequent hemorrhages and the persistent bloody discharge from the wound

There is, moreover, nothing very new in this hypothesis We need only recall that diseases of the liver often give rise to profuse hemorrhage, clinicians have noted the frequency of hemorrhage in cirrhosis, while it is only necessary to mention hemolytic jaundice and that disease which was so prevalent during the war, spirochetal jaundice The treatment employed was enough to induce rapid recovery by changing slightly the humoral equilibrium of the patient Because of its simplicity and absolute harmlessness, the method deserves the attention of physicians Much more simple than transfusion, the technic can be used under any and all circumstances The indications are obviously more restricted than those for transfusion, which retains its value for acute cases, and they are not definitely determined in all anemic conditions and hemorrhagic dyscrasias homohemotherapy apparently exerts a favorable influence

The foregoing case is reported mainly from an essentially practical point of view The facility with which homohemotherapy may be practiced gives it almost universal application Without preliminary equipment or surgical preparation of any sort, with only a good syringe sterilized by boiling, any physician can make subcutaneous injection of human blood, provided only that he is certain of the health of the donor From this point alone, homohemotherapy has an undeniably practical advantage over transfusion There need be no fear either of anaphylaxis or of producing embolism and infarct, as in transfusion of other than citrated blood There is no more danger than with an injection of serum, and it would seem that injection of whole blood has proved much more efficacious

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Sanitation and Antityphoid Vaccination—The protective value of antityphoid vaccination is no longer open to question No more definite test could possibly have been given than that afforded by the recent war emergency, a test by millions No better comparison was ever offered than the comparison between the awful typhoid mortality in our troops in the Spanish-American War, and the light incidence of typhoid in the far greater war from which we have just emerged, triumphant over noxious germs as well as noxious Germans War observation has taught us that vaccination is not a substitute for sanitary precautions It has demonstrated the possibility that men fully and properly vaccinated may yet succumb to typhoid invasion The probable explanation is that in such cases the victim is overwhelmed by infective material in enormous doses—*Bull Kansas Bd Health*, March, 1920

Clinical Notes, Suggestions, and New Instruments

A CASE OF VAGINAL SEPTUM AND BICORNATE UTERUS *

H G STEELE M D BLUEFIELD W VA

About 11 30 p m, March 7, 1920 I was called to see Mrs C E N, who had been wasting for thirteen days She was 18 years of age, and had been married since October, 1919 I found her in bed suffering with slight pains and wasting a little with evidence of having considerable uterine hemorrhage since 3 p m that day Examination revealed a bloody discharge in and about the vaginal orifice This was mopped away and the area made reasonably sterile with pledgets of cotton saturated with compound solution of cresol On attempting to insert two fingers into the vagina I encountered an obstruction a short distance from the entrance and found that only one finger could be introduced as far as the cervix without some unpleasantness to the patient This caused me to wonder how it was possible for this woman to become pregnant through so small an opening On withdrawing my finger and reinserting it into the vagina I found more room than before sufficient for the insertion of two fingers, and did insert two fingers up to the cervix On closer examination I found what appeared to me to be two vaginas leading up to two cervices, or a double cervix uteri, with an orifice opening into each vagina This partition in the vagina was attached to the anterior and posterior walls, and it seemed to be joined to a septum of the cervices The uterus was slightly enlarged

The patient gave a history of having missed two previous menstrual periods I packed the vaginas—the right with two pledgets of gauze, the left with one—after stretching both slightly I gave the patient a hypodermic injection of morphin sulphate, ¼ grain, and atropin sulphate, 1/150 grain, at 12 o clock, and left her for the night

At noon the next day she was brought to the Mountain View Hospital and put to bed At 1 30 that afternoon the gauze was removed On the gauze from the right side there was a bloody discharge, but none on the one from the left leading me to believe that there were two distinct openings in the cervix and a complete septum in the middle of the vagina

She slept most of the afternoon and was resting comfortably when I left the hospital at 10 o'clock that night At 1 30 the next morning the night nurse called me over the phone and said that she was having a hemorrhage A hypodermic injection of morphin sulphate, ¼ grain and atropin sulphate, 1/150 grain was ordered She rested well the remainder of the night, and the hemorrhage almost ceased

At 10 30 a m, March 9 she was put on the operating table and an anesthetic given The septum was put on the stretch and was found to be 6 cm long and 3 cm wide or the latter was the distance from the anterior to the posterior wall of the vagina when well dilated and this septum was from 3 to 5 mm thick

The cervix was pulled down with volsella until it could be seen in the left vaginal fornix The cervix was dilated and the uterus curetted with the index finger and then with a dull curet the remains of a placenta of about one and one half or two months being removed from the right side of the uterus On further examination an opening about 1 5 cm from the external os was found leading into the fundus on the left side of the uterus for a distance of about 6 cm, while the depth of the right or pregnant side was about 10 cm proving that I was dealing with a bicornate uterus At this period of the operation I discovered that the upper border of the septum was not attached to the uterus and that there was but one cervix or possibly I had converted two cervices into one, at the time of dilatation

The right cornu was mopped out with a strip of gauze saturated with equal parts of tincture of iodin and alcohol

The septum was clamped at the junction of the posterior and anterior vaginal walls and cut away between the clamps The stumps of the septum and the vaginal walls were painted with the iodin-alcohol solution and the vagina packed with a strip of gauze

The right side of this septum was covered with a smooth soft cartilaginous tissue while the left side was covered with convoluted vaginal mucous membrane

The clamps were left on the stumps of the septum gauze was wrapped around the handles and the patient put to bed At 7 40 p m that day the clamps were removed No bleeding followed At 8 20 500 c c of urine was withdrawn by catheterization The gauze was removed the next day

The patient did not seem to have any other deformity except a ptosis of the right eyelid She never had more than very little vision in this eye She made an uneventful recovery and left the hospital March 15 April 23 she was feeling well

* Read before the West Virginia Medical Association Parkersburg May 19 1920

PETROLATUM IN ANTERIOR CHAMBER FOLLOWING CATARACT EXTRACTION

ARTHUR WHITMIRE M D NEW ORLEANS

REPORT OF CASES

CASE 1.—*Following combined* cataract extraction the lids were covered with sterile petrolatum dressed and bandaged For several weeks following a round mass apparently lens substance of about 4 mm always assuming the highest level or angle of the anterior chamber was noticed and the eye developed low-grade iridocyclitis without the least absorption of the mass I happened to pass the patient on the porch one morning stopped to make an inspection the sun happened to be shining into the eye and to my great astonishment the spherical globule of petrolatum was unmistakably shown in its natural color I assisted the oculist in charge in its removal, by entering a keratome above when the petrolatum was floated on the blade and inspected The patient passed from under my observation but not until we had noticed a great improvement

CASE 2.—As in the foregoing case seen at the same clinic a patient presented iridocyclitis Petrolatum was suspected and demonstrated by inspection in sunlight The patient left without operation and was not seen again

COMMENT

Petrolatum in the anterior chamber will by artificial focal illumination look exactly like lens matter having no greenish-yellow color The appearance would never lead one to think of petrolatum In cases with sluggish absorption of lens matter, following cataract I advise sunlight inspection

A SIMPLE AND EFFICIENT MEANS OF APPLYING RADIUM TO BLADDER NEOPLASMS IN THE MALE

GIDEON TIMBERLAKE M D BALTIMORE

Some years ago Young devised a most efficient and trustworthy instrument for procuring tissue from bladder tumors for section and diagnosis The value of this instrument became greatly enhanced when it was found that it could be applied effectively to intravesical operations which ordinarily would call for some major operation to accomplish similar results The removal of tissue has served as a minor function as compared with the removal of foreign bodies including small calculi In fact after lithotripsy there are fragments of stone to be removed which cannot be evacuated by natural or artificial means yet which are too small and isolated to be within easy reach of a blind instrument like the lithotrite This instrument the cystoscopic rongeur actually accomplishes a vast deal more than would ordinarily be expected of it because of its versatility and adaptability to rather intricate problems which are soon made easy of solution

The application of radium to neopla[illegible]ble blad[illegible]der is more or less simple and to [illegible]

simple in the male, but because of the anatomic difference in matter of approach, it has been found necessary to devise rather complex apparatus to meet the requirements, and when done, there is always a great element of risk attending, because of discomfort to patients, which causes them to shift positions without the instrument following In fact, while excellent by comparison with less well appointed means, the work is done in the dark, and therefore it is uncertain

While I was working with Dr William Neill at the Kelly Sanatorium, the application of radium in the end of a cystoscopic sheath or metal catheter end impressed me as being rather clumsy and uncertain In contemplating the more "refined" methods of approach and application, these, too, seemed to have their weak points As we were requested to take a piece of a special tumor for diagnostic purposes, it occurred to me to try the cystoscopic rongeur as a means of holding a radium capsule and applying it It was found that a capsule was held snugly between the jaws of this instrument, and we were able to pass in an ampule containing a decigram of radium after this fashion, and to remove the obturator and replace it with the cystoscopic sheath and turn the nose of the rongeur to whatever part of the tumor we desired

It was necessary, of course, to hold the jaws of the instrument together lest we lose the parcel The bystanders naturally entertained some fear lest this slip out and be lost within the bladder It must be remembered, though, that removal of this capsule with the rongeur would be most simple, provided it did not fall into a diverticulum or hiding fold of the bladder In thinking this over, a simple means of security presented itself namely, using a pulley 'belt hook" to slip over the thumb and finger posts, which would hold the jaws well in place

After the instrument has been properly adjusted to the tumor mass, the cystoscope is removed and replaced by the obturator for the purpose of holding the fluid in the bladder If leakage has taken place or it is necessary to make further observation, the irrigating chuck-nozzle which fits into the tunnel of the instrument can be put in place and the bladder cleansed and filled with clear fluid, when further observations may be made with the cystoscope It is obvious that this method is short of completion, but it most certainly brings the solution of the problem to being more nearly accurate

Fortunately regardless of the position of the tumor mass, it can be approached with reasonable accuracy by this method, then, too, it permits of intensive or lighter radiation at each sitting, thus intensifying the treatment, and it minimizes the amount of discomfort of the patient, since the time of application is greatly lessened

What use may be made of this suggestion, or what impetus may be given to devising more efficient methods, is problematic, but I have recommended it because it is obvious that it has some merit

816 St Paul Street

A NEW METHOD OF PREPARING WAX BULB CATHETERS OR BOUGIES FOR USE THROUGH ANY OPERATING CYSTOSCOPE

T M DAVIS M D GREENVILLE S C

In the diagnosis and treatment of ureteral strictures in female patients I used beeswax with more or less success for the bulbs on the ureteral catheters, introducing them into the ureter by means of the Kelly cystoscope But several attempts to pass these beeswax bulb catheters into the ureter through a Brown-Berger operating cystoscope were unsuccessful The wax was always cut or scraped off in the passage through the instrument

After trying several substances I found that sealing wax was a suitable substance for making these bulbs Although the forming of a suitable bulb with it is somewhat more difficult, it more than repays for the trouble in its durable qualities, as there is no injury to the bulb in its passage through the operating cystoscope The bulb is not scratched by a stone, to determine the presence of which it is necessary to tip the catheter with beeswax before introduction

In applying the sealing wax to a catheter I generally use an olive tip size 6 or 7 French ureteral catheter, one with preferably two eyelets Usually one has on hand several of these catheters with some damage to the proximal eyelet These can be used, as the wax repairs the eyelet A wire stylet is passed into the distal eyelet past the second eyelet to preserve the lumen of the catheter The wax is placed at the site of the proximal eyelet, or about three-quarters inch from the end of the catheter The sealing wax is heated in a flame and applied directly to the catheter (which must be dry) This is repeated as often as necessary, until the desired amount of wax is on the catheter, which is shaped into the form of an olive with some heated metal (as the end of a scalpel), and completed with the blade of the knife by gently scraping until the desired shape is obtained For diagnosis I usually prepare a bulb 4 mm in diameter, as this will pass easily through the cystoscopes and will give very satisfactory results A small wire stylet in the catheter is employed to give sufficient resistance against undue bending of the catheter

Having used this method in both male and female cases I can say that it is much more comfortable for female patients than is the use of the Kelly cystoscope as formerly

CHRONIC TOTAL INVERSION OF THE UTERUS

VIGGO W JENSEN ST LOUIS
Intern St Louis City Hospital

This case is reported because the condition is unusual, it was apparently of long duration, the gynecologic symptoms were of late onset, and the patient had been treated for 'nervousness"

Mrs R M, aged 43 complained of pain in the abdomen which was sharp and lancinating, beginning March 4, 1919, persisting, and becoming progressively worse It arose in the left lower quadrant, and then crossed to the right lower quadrant, where it may arise though this is less common

The patient, who had been married three times, had one child during the first marriage, twenty-three years before, and had not been pregnant since Menstruation was regular up to and after marriage The duration was about four days of twenty-eight day type Since March 4 1919, the day on which the third husband was killed, it has been coming on every two weeks with an increase in the number of napkins Prior to this date she had no idea of how long she had had a watery discharge, but after the foregoing date the discharge became red and continued so There was no leukorrhea

For about two years she had had attacks of dizziness, with black spots before her eyes at times other than at menstruation and also progressive loss of appetite and constipation She had for years had difficulty in walking upstairs or working hard, because she 'got out of wind," and occasionally when lying down, she had choking spells and then had to sit up in order to sleep

The patient was well nourished The skin had a yellowish tint There was increased cardiac dulness to the left, with systolic murmurs at the base and apex The abdomen showed tenderness in the iliac fossae, and the lower margin of the liver was just palpable There was slight edema of both lower extremities

Vaginal examination revealed the vagina filled with a spherical tumor, the size of a goose egg, fairly hard, of uniform consistency, with a smooth surface, and easily followed up to the vaginal fornix A cervical ridge could be made out in the right posterior quadrant, where a finger could dip into a shallow cavity, probably not more than one-half inch deep

Above the symphysis, no distinct mass could be palpated In the speculum, the vaginal mass appeared covered by a soft, grayish membrane, which only in certain portions higher up bled easily on being rubbed Nothing was visible to suggest a tubal opening A diagnosis of total chronic inversion of the uterus was made

The uterus was removed by the Spenelli method and the clinical diagnosis confirmed The length of the uterus from

the internal os to the fundus was 5 cm , the circumference here was 12 cm , about 9 cm at a point corresponding to the internal os

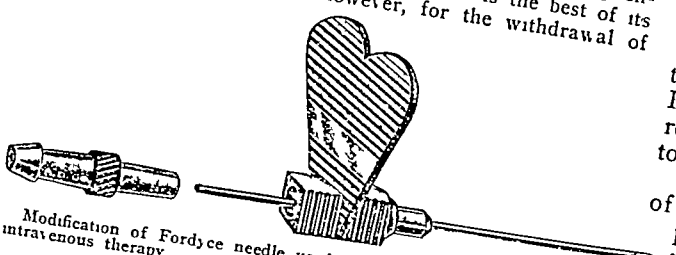
The mucosa was about 2 mm thick, very red shading toward the internal os into a pale pink, streaked with capillaries but the surface was intact except for surgical destruction and was movable on the underlying tissue From the peritoneal side the fundus appeared as a mass, there was no cavity here and portions of the tubes and ligaments had been dragged into this mass with the cervical arteries, in their relative position somewhat sclerotic. The cervical ring was obliterated The tubes were patent from the peritoneal side but not from the mucosal The surfaces made by cutting rolled out oozing with a watery fluid, they were smooth and appeared made up of minute strands The histologic exam ination revealed normal mucosa and muscle of the uterus

This inversion was probably of twenty years' standing as the patient stated that at the birth of her only child she had uterine inertia which was overcome by drug stimulation, she was delivered with forceps followed by unconsciousness for one day She was about the house on the third day and ten days later walked a half mile She was told by her physician that she would never bear another child because something else beside the afterbirth came away Since then she had had intermittent urinary disturbance pain over her lower abdomen and passing of liver-like clots on excessive inter- course

MODIFICATION OF FORDYCE NEEDLE USED FOR THE COLLECTION OF BLOOD AND FOR INTRAVENOUS THERAPY

E W ABRAMOWITZ M D NEW YORK

The Fordyce needle used for the administration of arsphenamin is of 19 gage and in my experience is the best of its kind When one uses it however, for the withdrawal of



Modification of Fordyce needle used for collection of blood and for intravenous therapy

blood, unless a syringe is attached the blood spreads out over the parts and causes soiling of the fingers, recep'acles, linen etc

I have devised a modification of this needle consisting of a stem through the hub beyond the holder of one piece at the same time not changing the socket of the holder thus making it possible for the original Luer adapter to fit around the needle The administration of arsphenamin can be proceeded with without puncturing the patient again The needle can be procured from James T Dougherty 409-413 West Fifty-Ninth Street, New York.

DIRECTIONS FOR USING THE NEEDLE

After skin sterilization a tourniquet is applied and the needle inserted into the vein A stream of blood passes inside the receptacle and one can collect 50 c c. of blood in a few minutes in this way when necessary as for intraspinal or autoserum work The tourniquet should be loosened before the gravity apparatus is attached to the needle, thus giving a comparatively clean field for operation

46 West Eighty-Third Street

Swat the Fly—Fly prevention can be accomplished only through efforts of the entire community working as a unit Competent authorities have estimated that the product of a single fly in forty days would equal 810 pounds provided one half of the offspring survived

Special Articles

OBSERVATIONS ON SOUTH AMERICA

I JAMAICA AND CANAL ZONE

WILLIAM J MAYO M D
ROCHESTER MINN

To the vision, courage and political sagacity of Theodore Roosevelt the world owes the Panama Canal The severing of the land connection between North and South America united the peoples of the two continents, and now that the war is over, trade and travel between North and South America will grow in an unprecedented manner The ease with which either coast of South America may be reached from North America is still scarcely appreciated by the people of either continent The trip from New York to Lima, Peru, can be made in very comfortable steamers in eleven days, and to Valparaiso, Chile, in fifteen days New and faster steamers are being put on which will readily reduce the time four days It will soon be possible to make the journey from New York to Rio Janeiro in less than two weeks, and to Montevideo and Buenos Aires in from fourteen to sixteen days Because of the many stops made by some of the steamers, the time is lengthened, but the interest to the traveler is enhanced by the opportunity given for visiting the West Indies, the Canal Zone and the coast cities A most delightful route is by way of the Panama Canal and the west coast, with various stops, to Valparaiso, Chile, then across by the Transandean Railway to Buenos Aires and Montevideo, and the return by the east coast via Rio Janeiro and other towns of Brazil

In January and February of this year I visited some of the countries and cities of South America for the purpose of observing superficially it is true, the methods of education and university organization and more in detail the medical schools, hospitals and research institutions I wished particularly to see and profit by attendance on the surgical clinics of the eminent surgeons of these countries I intend briefly to describe a few of the many interesting phases of our trip with the hope of stimulating others to take similar trips, not alone for the purpose of travel and recreation, but for the profitable study of the medical conditions of our Latin-American neighbors A brief review of the historical and geographic background may give a better understanding of the relations between the two continents (Fig 1) In 1492, Columbus landed on San Salvador, one of the Bahama Islands In 1497, the Cabots reached the mainland of North America There is evidence to show that Leif Ericson made a temporary settlement in North America about the year 1000 A D In 1498, Columbus landed on the mainland of South America near the mouth of the Orinoco River, and on his last trip in 1502, he visited the shores of Panama It is interesting to note that in the next fifty years the Spanish conquest of Mexico, Central America and South America was about completed The original people were Indians, and on this Indian stock the Spanish conquerors grafted Brazil is Portuguese, the country was discovered by Cabral of Lisbon in 1500

The native Indians of South America varied in degree of civilization and in characteristics In Mexico,

Peru and Bolivia they reached a high stage of civilization of a certain type The Araucanian Indians of the southwestern part of South America were much more warlike, a brave and hardy race, whose characteristics are still manifest in the Chileans Generally speaking, the South American natives were a superior type of Indian, and when they mixed with the white race many of the good characteristics of both races were retained There seems to be an impression in North America that there is a mixture of the negro in the people of South America It should be remembered that the negroes are to be found in the southern half of the United States and in the West Indies, that they are of an alien race brought over from Africa, and that there has been less mixture of the Africans with the Indians of South America than with the whites of North America Negro and negro mixtures have been little in evidence in Peru, Chile, Argentina and Uruguay The peoples of South America who have Indian blood are proud of their ancestry, as are the descendants of Pocahontas and John Rolfe North Americans have frequently given great offense to the South Americans by failure to recognize this fact

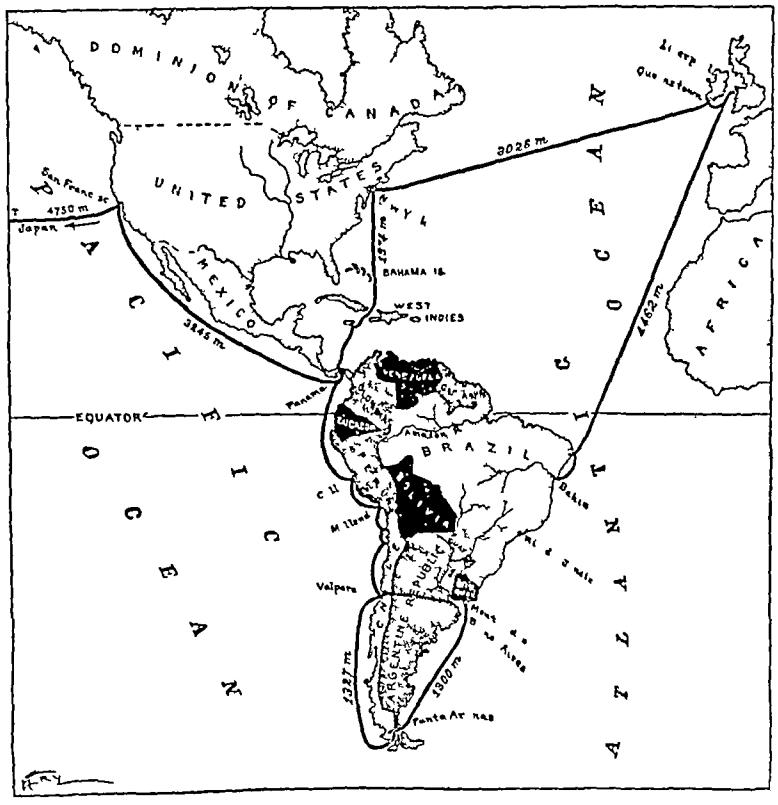


Fig 1—Map of the Western Hemisphere with trade routes

South America lies east of North America, the west coast of South America lies east of the east coast of Florida The Panama Canal is almost straight south of New York Valparaiso, Chile, lies east of New York The west coast of South America, therefore, because of the Panama Canal, has been brought in touch with the United States From the Panama Canal to New York is a distance of 1,974 nautical miles, and from the Canal to San Francisco, 3,245 miles, from the Canal Zone to Liverpool is 4,548 miles, and to Yokohama, Japan, 7,682 miles

In the narrow valleys and coastal plains of the west coast of South America the soil is extremely rich, and sugar and cotton are raised Because the mountains extend to the west coast in portions of the country, and because of the lack of moisture, all that is raised, except in the southern part, is produced by irrigation The mountains are rich in minerals The world's supply of vanadium is in Peru, the tin, silver, copper and tungsten mines of Bolivia, Peru, and Chile are among the richest known, and the nitrate (saltpeter) fields of Chile are the wonder of the world

The trade relations with the west coast of South America have not the possibilities of those of the east coast where the great plains exist On the east coast the distances are not sufficiently in favor of the United States to give any particular advantage The distance from the east shoulder of South America, at Pernambuco, Brazil, to New York, is 4,062 miles, and to Liverpool, 4,467 miles, and since the Gulf Stream runs direct to the British Isles with from a knot and a half to two knots an hour of current, the advantages are considerable in going from the east coast, Rio Janeiro, Montevideo or Buenos Aires, to Liverpool It is true that the return voyage from Liverpool is against the Gulf Stream, but going to and from New York, the Gulf Stream must be crossed The rich portions of eastern South America are tropical and subtropical, and extend down into Argentina Rubber, cotton, sugar and coffee are raised The great fertile pampas of Argentina, which remind one of the prairies of Illinois, Iowa and South Dakota, stretch out for a thousand miles to the south The southern half or more of Argentina lies in a temperate climate favorable to the raising of grains, cattle and sheep

DIRECT CONTRAST BETWEEN NORTH AND SOUTH AMERICA

North America has an area of 8,500,000 square miles, a certain proportion of it lies too far north to be of great value South America has an area of 7,420,000 square miles, but possibly 25 per cent of it comprises the great basins of the Orinoco, Amazon and Parana rivers, areas too low and swampy for continuous human habitation Millions of years may pass before vegetation and the deposits from the washings of the mountains will sufficiently elevate this country for a salubrious climate This lowland region, which extends well up to the Andes Mountains, is very interesting

By entering the River Plata and going up the Parana through the branches of the Amazon, explorers with easy and short portages have finally reached and come down the Orinoco River Much of the low territory is in Brazil, which has two distinct regions, the tropical lowlands of the north and west, and the temperate uplands of the center and south The United States is about the size of Brazil, each containing a little more than 3,000,000 square miles North America has approximately 120,000,000 inhabitants, South America has about 50,000,000, and of these Brazil has nearly half, 24,000,000, who are Portu-

guese speaking people In the remainder of South America the language is Spanish

In a study of the characteristics of the people of North America and South America great differences will be found, since the cultured, intelligent class, white or largely white, in South America is small, while the ignorant Indian class is extremely large Unfortunately, up to the present time there has been almost no middle class in South America, although such a class is in the process of development In the large cities primary education, while not compulsory, is extensive In Brazil the primary schooling is three years, in Peru, Chile, Argentina and Uruguay it is from five to six years The difficulties of general education outside the cities, where the estates are very large and the population scanty, are not easily overcome The course of education in the secondary schools is six years, but these secondary schools are limited in number In the various countries in South America Spanish is generally spoken by the cultured class French and English are the next most extensively spoken In most of the secondary schools English is taught, at least as an elective study Persons intending to go south would do well to learn Spanish, a knowledge of this language will also enable them to communicate with people who speak Portuguese Spanish is easily learned and the vocabulary is relatively small When the vast possibilities of South America, which are equal to those of North America fifty years ago, are considered, and it is realized that South America at the present time is as yet underdeveloped and underpopulated, no prophet is needed to foretell that

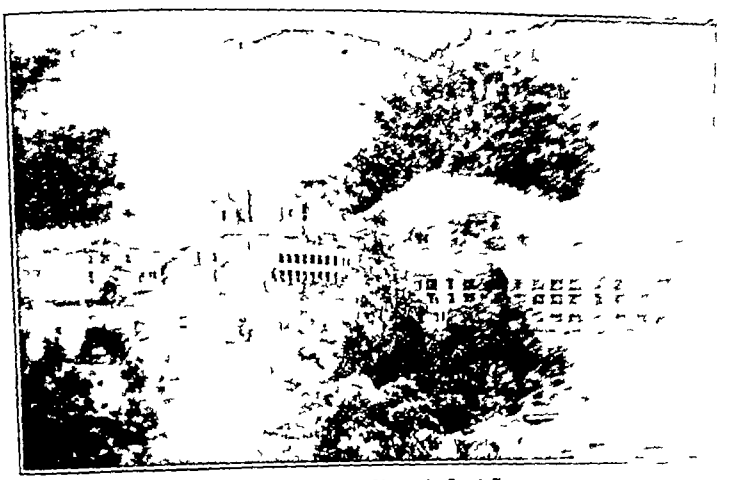


Fig 2—Ancon Hospital Canal Zone

are negroes The great supply of laborers for the building of the Panama Canal was obtained from Jamaica, the French island of Martinique, and the Barbados In Kingston, the capital of Jamaica, are several excellent English physicians Small modern homes of the English type are maintained for the care of white patients A hospital is supported by the English government for the negroes, among the patients a freckled, red-headed negro was seen This hospital also has a ward for white sailors Jamaica is a typical West Indian island, and contains a great deal to interest the northern traveler and the physician interested in the tropical diseases of the negro

The negroes in Central America, especially in the Canal Zone, are often called "silver," and signs of "Silver" instead of "Negro" are used, as the dollar of these Central American countries is on a silver or fifty-cent basis "Gold" denotes the white people, who are paid on a gold basis

[illegible]

Less than two days' sail from Jamaica into the Caribbean Sea bring[illegible] to the Canal Zone [illegible] "the rim of the [illegible]

of the hospital Seven and one-half dollars a day is charged for a private room, and $2 extra for private bath Nurses are supplied for $5 a day on an eight-hour day schedule Thus room and adequate nursing costs $24 50 a day The people of average means cannot, of course, procure such attention, but they have access to the wards at $3 50 a day Employees of the government are cared for in the wards free of charge, and in private rooms with a reduction of about 25 per cent from the regular price There are about eighty registered nurses and a nurses' home, but no training school

There are not enough army medical officers to do the hospital work, and the bulk of it is done by contract surgeons who receive a salary of $200 a month This means, of course, a constantly changing medical personnel An examination of conditions in the United States Army, relative to the medical force, leads to certain reflections Appointments to service in the Regular Medical Corps of the Army are not sufficiently attractive to young medical men to keep the ranks full The medical officers are inadequately paid, without authority in their work, and without facilities for study and observation If they take time for the purpose of obtaining scientific knowledge, it must be taken at their own expense and in lieu of vacation They are under the iron-clad and often unsympathetic rule of purely military men, who are as yet little touched by social progress The West Point man, controlled by unwritten laws, has himself to blame for the suspicion and prejudice of the American people because of his lack of interest in all fields outside the purely military There are so many splendid exceptions to this statement as almost to negate it, and no doubt the system and not the man is to blame for existing conditions At least it may be said for the West Point men that they are honest, loyal and brave The candidate for West Point must be a graduate of a high school After three years at West Point at the expense of the government, he assumes a life position of authority and the controlling of men, a control based on authority not necessarily on ability The army medical officer is a civilian educated at his own expense, with from seven to nine years' training after the high school, as against the two to three years of the West Point man Is it any wonder that young men planning a career of usefulness do not choose the Army medical service? Some of the greatest men in medicine, who by their scientific work have done much to conquer disease and prolong human life, have belonged to this service During the war my brother and I, as chief consultants for the surgical services, were brought constantly in contact with the medical officers of the Regular Army, and I take this opportunity to render merited tribute to the ability, integrity and scientific knowledge of these men The medical officers who controlled the various departments in the Surgeon-General's Office in my opinion averaged higher than men of the same relative position outside the Army Working under rules and conditions not of their own making, they were just and fair-minded, giving loyal service and achieving results which helped greatly to win the war It must be remembered that when we entered the war there were less than 500 medical officers in the Army In investigating criticisms of the medical officers of the Regular Army, I found almost invariably, when I have investigated, that it was the civilian medical officer who had joined the Regular Army Corps after the war broke out who was at fault, and not the officer who had been trained in the Corps The medical profession of the United States owes it to the fine body of men who represent them in the United States Army to take united action to obtain for them authority, position, pay and, above all, opportunity for professional study The medical profession can, if it will, make the Army medical service one which will attract capable young men and keep the quota of medical officers full

THE NURSE QUESTION

The arrangement in the Ancon Hospital of an eight-hour schedule for the trained nurse calls attention to the fact that the registered nurse under present conditions is a luxury that cannot be obtained except by the well to do, and this brings up the question Is the trained nurse a luxury or a necessity? The answer must be that she is a necessity The high-standard registered nurse is one of the greatest blessings of modern civilization She has spent three years of twelve months each in training after graduation from high school, thirty-six months in all, the equivalent of a university course of four years of nine months each, and in a university the same time and work would have won for her the degree of Bachelor of Science The registered trained nurse is not overpaid, considering the character of her training, rather is she underpaid, for she represents the best type of human machine for the care of the sick But we need other types of nurses less highly trained but nevertheless important social service vehicles, the Fords, so to speak, of the nursing world If representatives of the nurses' union are approached on the subject of vocational training to develop a large number of young women for this important work they are indignant and call attention to the fact that standards are being raised for physicians, and they ask why they should lower theirs In this connection it should be remembered that the physician is expected to care for rich and poor alike, and allow no one to suffer for lack of such care, regardless of his ability to pay for service This is not and can never be the case with the registered trained nurse A solution of the problem of the training of a sufficient number of nurses is difficult My sympathies are with the highly trained nurse, and I would be the last one to desire to curtail or reduce the training in any respect, but there are other considerations Only one of 450 students who enter our public schools graduates from the university One in ten who graduate from the high school enters the university, and one in thirty graduates

There is only the equivalent of the university graduate at the present time in the nursing world, and in the interest of all the people there should be different grades of nurses instead of a dominion of the field by an aristocracy The time will come, and soon, when there will be the same grades in nursing that there are in other forms of education, for example, common school nurses for the home and family, high school nurses with vocational training, and the university (registered) nurses The difficulty in carrying out the plan will be in the providing of adequate training for the many young women who may apply for the "common school" course, because the training cannot consist of merely textbook and demonstration courses, but must be the care of the sick in hospitals, the most important part of the preparation Although the difficulties are many, they are not insuperable The first

six months of the course would be the same for all applicants, for various reasons many would stop at the end of this period of probation Those who drop out at the end of the year would receive a certificate of completion of one year's work Those who remain for the second year would receive a certificate of completion of two years' work, and those who fulfil the requirements of the three-year course would receive a diploma of graduation The graduates, who had had preliminary cultural training, after passing suitable examinations at the state university would be granted the degree of Bachelor of Science, as the equivalent of that which is now given for training in medicine, dentistry and other professional branches

THE REPUBLIC OF PANAMA

In the City of Panama the Republic of Panama has a hospital of 500 beds It has a training school for nurses of various tints, very few are white Any licensed physician may bring patients to the hospital and operate This means an unrestricted staff Under the progressive management of the government of Panama, plans are being made for a splendid new hospital to be built on fourteen acres of land, a peninsula projecting into the ocean

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ANESTHESIA IN NOSE AND THROAT WORK

ABSTRACT OF THE REPORT OF THE COMMITTEE ON THE ADVANTAGES AND DISADVANTAGES OF THE VARIOUS LOCAL ANESTHETICS *

EMIL MAYER, M D, NEW YORK CHAIRMAN, ROSS HALL SKILLERN, M D, PHILADELPHIA, AND ROBERT SONNENSCHEIN, M D, CHICAGO, COMMITTEE

Following the request of the Council on Pharmacy and Chemistry of the American Medical Association through the chairman of the Committee on Therapeutic Research, the Section on Laryngology, Otology and Rhinology was asked to appoint a special committee to study and report on the special advantages and disadvantages of local anesthesia in nose and throat work, to sift the available data and decide what further investigations would be necessary to clarify the subject The committee was duly appointed, and presents herewith its report

By a happy though fortuitous circumstance we have the honor of presenting this report in New Orleans, the home of Prof Rudolph Matas, who has done more to establish the value of local anesthesia than any other surgeon in the United States, and to whom we are glad to pay our respectful homage for his splendid work in this direction for his scientific attainments, and for the incalculable benefit he has thus given to suffering humanity

Realizing the vast importance of the study of this subject, we arranged the following plan as our objective

To compare local anesthesia and its effects with general

To check laboratory data by *clinical data*

To ascertain what clinical literature offers in support of the use of the several local anesthetics in different conditions, and of concentrated solutions rather than dilute in any case

To determine what cases show idiosyncrasy with a view to determining causes

To ascertain the relative merits of cocain and the synthetic products

To determine whether or not hemorrhage during or after operation is greater under local than under general anesthesia

To study the toxicity faithfully, noting especially injuries to the mucous membrane

To note the effects of the previous administration of morphin in reducing dangers of toxicity, and in adding to the comfort of the patient

To compare the effects of local and general anesthesia and finally to make such recommendation as may be deemed advisable

The study of the literature was undertaken, clinical experience sought and animal experimentation arranged for The study of the literature included the pharmacologic investigations on record In the study of the clinical manifestations it was ascertained that the Council on Pharmacy and Chemistry, believing that not all fatalities were reported inserted an announcement in thirty-eight different journals requesting reports on any fatalities following the use of local anesthetics They received only two replies Your committee had a similar experience in that its request through THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION was followed by but one reply which had nothing to do with the subject at issue A questionnaire was then sent to 150 members of the section and this was very fruitful of results Animal experimentation was kindly undertaken by Prof Robert A Hatcher with a view to ascertain what effect if any morphin had on the toxicity of these drugs From the literature the committee quotes statements from the introduction to the book by C W Allen on Local and Regional Anesthesia by Matas as also by the author, from several nose and throat specialists and from a recent article by Dorman in THE JOURNAL. All show the great advantages of local anesthesia The latter writer in particular quotes Thomas and Cushing who removed a brain cyst under cocain anesthesia in which four previous operations were attempted under general anesthesia and failed although it was entirely successful when done under local anesthesia

A resume of the literature thus presented indicates the advantages of local anesthesia in nose and throat operations

DISADVANTAGES OF LOCAL ANESTHESIA

The disadvantages of local anesthesia are claimed to be difficulty of control of bleeding at the time of operation tendency to postoperative hemorrhage, difficulty of sterilization edema and sloughing and greatest of all, toxicity

After most careful investigation among American operators who favor local anesthesia in nose and throat work—and they are by far in the great majority—no unusual difficulty from bleeding at the time of operation was admitted nor was there any belief that there was a greater frequency of postoperative hemorrhage after local anesthesia than under general anesthesia by the largest majority of operators

It was readily admitted that there was always an element of likelihood of bleeding in an adult whose tonsil had already become fibrous but it was not admitted that the anesthesia had anything to do with the bleeding

STERILIZATION

There seemed to be no doubt that occasionally epinephrin loses its ischemic effect on boiling, and should therefore be tested as to its activity and it is stated that procain is difficult to sterilize MacNaughton-Jones has presented an article on the sterilization of local anesthetics which consists in preparing a solution of sodium chlorid together with the anesthetic and epinephrin chlorid, each constituent being present in such quantity that a dilution with many times the volume of water will give a solution containing the requisite percentage of each The preparation is placed in a sealed vial or ampule and kept until required Sterile water is added before injection

The attention of your committee was called to an apparatus for the triple distillation of water previous to its use as a solvent for procain It was stated that it had been successfully used at one of our base hospitals in New York City Inquiry of the originator as to the reasons for triple distillation failed to elicit any response

* The complete report of the committee will appear in the Transactions of this Section for 1920 also in reprint form

* Read before the Section on Laryngology Otology and Rhinology at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

EDEMA AND SLOUGHING

The only local anesthetic that produces edema and sloughing is quinin and urea hydrochlorid So many statements were found in the literature that this anesthetic had been abandoned in other fields of medicine because of edema and sloughing, that writers who had presented favorable reports in nose and throat operations were communicated with by your committee One writer who had recorded 390 cases of tonsillectomies extolling this anesthetic which he had used for four years and is still so recorded, now states that he has not used it in two years, although no publication has been made retracting his former endorsement Still another writer, who stated that quinin-urea came nearest the ideal local anesthetic, now states that he has ceased using it Your committee finds that as far as nose and throat operations are concerned, this drug has practically gone into "innocuous desuetude"

IDIOSYNCRASY

Your committee found one case in the literature in which the toxicity was claimed to be due to idiosyncrasy This was that of a woman, aged 43, who had a tooth extracted and 1 c c of a 1 per cent solution of cocain injected She had been treated for years previously for tachycardia excessive perspiration and dysentery Almost complete paralysis followed, the symptoms gradually subsiding after two weeks of illness In this case there was a preexisting neurosis of the sympathetic, tachycardia, excessive perspiration, and tendency to diarrhea The small dose of the drug ordinarily nontoxic, was sufficient to upset the feeble balance of so many years, and this may help to explain the term 'idiosyncrasy"

TOXICITY

This chapter is a most important one in the discussion of disadvantages of local anesthesia and merits most careful study and investigation

We can conceive of nothing more distressing than a death occurring when least expected, within two or three minutes after the injection of the local anesthetic, for an operation that is performed in the largest number of instances to relieve conditions that may add to the comfort of the patient thus prolonging life, but not immediately necessary, to which the patient submits at our earnest advice It is by a study of these fatalities that we may hope to obtain a fuller knowledge of the contributing factors and to reach conclusions that may tend to prevent their occurrence Because so little is known of this subject and because of its vital interest, our research has been thorough into both recorded and unrecorded cases

The toxic effects may range from mild symptoms grave and threatening ones, to sudden death

Recent literature contains the record of two deaths from cocain and three deaths from procain, in one of them a necropsy was made in which neither status lymphaticus nor hypoplasia of the chromaffin system nor any other cause for sudden death was found The small dose of scopolamin and procain with the usual amount of epinephrin added could be dangerous only if some unexplained susceptibility existed The writer can find nowhere in the literature a suggestion that danger exists from intravenous injection (he is evidently unacquainted with the work of the American pharmacologists) Death here was due to the heart, evidently an abnormal susceptibility to the drugs on an unusually bad heart Some half dozen cases of toxic effects, nonfatal, are briefly recorded, taken from the literature as also one death from apothesin Mention is made of an article by H C Hamilton, who states that epinephrin is an adjunct to and an antidote for apothesin poisoning

Several cases of poisoning are also mentioned following beta-eucain Macht finds that *benzyl alcohol* has lower toxicity than cocain He says it has as good anesthetic properties, is quickly excreted, easily sterilized and is cheap and satisfactory clinically Fatalities are recorded following the use of stovain McMechan declares that procain is from one-fifth to one-seventh as toxic as cocain, and suggests the advisability of adding an alkaloid like sodium bicarbonate, making it much more useful for anesthesia

NEW LOCAL ANESTHETICS

Allocain S (soluble) and Allocain A (insoluble) are made from a Chinese drug with the addition of a synthetic alkaloid The object of the originator was to obtain a body possessing the local anesthetic properties of cocain, together with the vasoconstricting action of epinephrin It is claimed for Allocain S that among other properties it inhibits the growth of streptococci and staphylococci

CLINICAL INVESTIGATIONS

As nothing was learned of toxic effects through requests in medical journals, we prepared a questionnaire, seeking information directly from fellow-members of this section of the Association, and 85 per cent of these answered While this large number of responses is eminently gratifying your chairman regrets that even so small a number should be found who fail to answer to their own committee on a subject of such vital interest to themselves The result of this questionnaire has been exceedingly valuable and interesting We have received reports of the anesthetic used, its dosage etc, but have also many reports as to toxic effects, nonfatal, and further, a record of twenty deaths, most of them not previously recorded

REPLIES TO QUESTIONNAIRE

The following was submitted

1 What method of local anesthesia do you use for operations on the nose?

2 On the throat?

3 Do you use an anodyne first? If so what doses?

4 What toxic effects have come under your notice?

5 Do you know of any fatalities?

Answers were received from about one hundred, and these are detailed in the report Your committee received replies relating to twenty deaths, two from nose operations, and eighteen from throat operations, and these are briefly presented herewith

1 Procain injected No further details No amount stated

2 Large fat girl of about 20 for tonsillectomy About 3 drops of solution said to have been injected with immediate death 0 5 per cent cocain in epinephrin 1 10 000

3 (*a*) A girl aged 20 with severe endocarditis Injection of tonsil immediate death Necropsy large vegtations in heart interference with valve action Heart stopped in systole Five-tenths per cent solution cocain (Two deaths)

(*b*) Officer aged 25, previously operated on (submucous and ethmoid) without toxic effect One tonsil injected, immediate death Necropsy marked enlargement of thymus with general glandular enlargement Cocain, 1.2 per cent. solution

4 Injection of 20 minims of equal parts of 1 per cent cocain and epinephrin 1 1 000 for tonsillectomy The patient became faint and died in less than three minutes

5 No further details Injection of 5 per cent solution of cocain instead of swabbing

6 Immediately following injection of less than 1 dram into peritonsillar tissue great apprehension air hunger, convulsive movements succeeded by cessation of respiration and gradual cessation of pulse Injection of 0 75 per cent solution of procain and epinephrin 1 30 000 into peritonsillar tissue

7 No further details Ten per cent solution of cocain injected mistaken for 1 per cent procain solution

8 Twenty per cent solution of cocain in larynx Patient died almost instantly after application

9 A robust man aged about 43 after two syringefuls fell to the floor unconscious and died in spasm in a few minutes (Mistake of druggist) Ten per cent cocain solution injected around tonsil, mistaken for 0 10 per cent solution

10 A man, aged about 28, had an attack of angina pectoris and died two hours after operation Necropsy revealed fatty degeneration of the heart muscle Cocain and epinephrin injected, strength not stated

11 Patient received, in all about 2 drams, 0 2 per cent cocain in epinephrin was injected, death occurred in one hour

12 No further details Injection of ¼ grain of cocain into the anterior pillar with death in four minutes

13 Woman aged 30 Local application of cocain, 10 per cent followed by injection of procain 0 5 per cent, with 8 drops of epinephrin to 4 drams One dram injected into

each tonsil First tonsil removed, when patient gasped and died

14 Woman, aged 21 Three syringefuls injected under the mucous membrane of each faucial pillar Injection of 2 per cent cocain with equal parts of epinephrin, 1 1 000

15 No further details Cocain applied to throat and epiglottis

16 Woman, aged 25 Injection of about 100 minims of 0 5 per cent procain with 2 drops of epinephrin chlorid After about three minutes a slight convulsive movement involving the head and neck was noticed, followed in a few seconds by one more severe attack, including the shoulders, chest and upper arms Tightly closed jaws dilated pupils fixed gaze wide palpebral fissures, stertorous breathing moderate but soon marked cyanosis passing of the violent convulsive seizures into a marked and general tremor Cardiac action, 120, complete respiratory paralysis in ten minutes Cardiac action continued some time

17 Injected into tonsil the patient dying instantly (Mistake of druggist) Twenty per cent solution of cocain injected instead of 0 5 per cent

18 Injected 0 5 per cent procain after painting with 10 per cent cocain solution

The nose operations that had a fatal ending were for septal operations (1) a weak solution of procain and epinephrin injected into the septum, with immediate death, (2) a 10 per cent solution of cocain mistaken for the 1 per cent solution injected into the nose

A review of these fatalities shows that fourteen occurred as a result of the administration of cocain and six from procain Of the cocain deaths five were due to avoidable mistakes, the remainder died within a very short time as a rule after the administration of the drug, usually within three minutes

Some of these cases have already been recorded and there is no means at hand of ascertaining the proportion of deaths occurring as compared to the number of cases in which local anesthesia was used

As deaths have been recorded following rapid injection of epinephrin in 1 1 000 solution, your committee has carefully gone into this question but has found no evidence at hand that epinephrin in these cases was a causal factor

THE ADMINISTRATION OF MORPHIN BEFORE OPERATING

As quite a number of our associates usually employ morphin preliminary to operating or immediately after and as it was claimed that its administration previous to operation added much to the comfort of the patient, lessened the dangers of the local anesthetic and added greatly to its lasting effect, this subject was included in the questionnaire and animal experimentation was made to help elucidate it In one of the animal experiments a cat had been given a poisonous dose of chloral hydrate It was then replaced in its box and slept off its effects Another animal was given the same dose and fastened to a board, when it promptly died This would indicate that excitement might be an added danger which morphin would tend to subdue

PHARMACOLOGIC STUDIES ON LOCAL ANESTHESIA

A brief summary is given of the more recent studies of the various synthetic preparations in use for local anesthesia, as also a report of animal experimentation made for this investigation particularly in reference to the use of morphin and atropin preliminary to operation under local anesthesia The protocols of these examinations follow and your committee finds that the result of these investigations as to the use of morphin is rather negative If anything it shows that the cat succumbs more readily to a poisonous dose of both drugs In the human being there is in many instances a state of apprehension to operations which the administration of morphin is likely to allay and your committee believes that its use is not contraindicated and should be further tried

COMPARISON OF LOCAL AND GENERAL ANESTHESIA

Your committee finds that local anesthesia is the method of choice by practically all American rhinologists There is less hemorrhage far greater safety especially when operating near the cribriform plate and the dangers of toxicity will compare favorably in the use of the local anesthetic in preference to any general anesthetic Even the nitrous oxid and oxygen combination, looked on by many as absolutely safe has a record of deaths that destroys that assuredness One observer has reported thirty-seven deaths from this safest' anesthetic

In throat operations the unanimity is not so great a small minority adhering to general anesthesia for greater rapidity in work and ease and comfort to the operator

The majority operate under local anesthesia and declare themselves to be entirely content therewith

The ideal anesthetic having the effects of cocain and absolutely nontoxic has not been found and we realize that the successful anesthetic of today may be discarded on the morrow, nor are we averse to the reporting of those which seem successful at the moment, but we deem it essential that once having so recorded and endorsed it especially if unqualified the same publicity should be made in the event that one has ceased using the drug for grave and important reasons

It should be understood that this entire report refers to *adults only*

SUMMARY

As a result of the study of the literature clinical experiences and animal experimentation we conclude that

1 There is a remarkable similarity in the clinical effects and animal experimentation

2 None of the synthetic products equals cocain in its local effect when applied to the mucous membrane

3 These synthetic products may be freely injected, if slowly done in proper doses in unlimited quantities

4 Fatalities either occur immediately or not at all

5 The drug is eliminated in the liver

6 The greatest danger lies in too rapid injection or entering a vein

7 A peculiar susceptibility which we term idiosyncrasy does exist, as the drug enters into the circulation so rapidly that death is almost immediate

8 A further study of the toxicity of these local anesthetics will result in definitely establishing the causes of death

9 Local anesthesia is undoubtedly the choice of methods by all American rhinologists in nose operations

10 It is also the choice of a very large proportion of American laryngologists in throat operations

11 There is a small number who believe that tonsil operations particularly are best performed under general anesthesia

12 The dangers of hemorrhage during tonsil operations under local anesthesia are no greater than under general

13 There is no greater danger from postoperative hemorrhage under local than under general anesthesia

14 The previous administration of morphin requires further investigation

SUGGESTIONS

Your committee suggests that all operations be performed with the patient recumbent beginning with the first application of the local anesthetic except in sinus operations, in which the head and shoulders may be elevated to an angle of 45 degrees and the table raised so that proper direction may be maintained

Each operation should be preceded by a hypodermic injection of morphin and atropin and the patient kept in the hospital

In nose operations epinephrin should be applied first followed by cocain and the injection of the synthetic drug *introduced slowly*

In throat operations a 5 or 10 per cent solution of cocain should be applied followed by the *slow injection* of the synthetic product

When there may be a suspicion of possible danger one fourth of the amount of anesthetic to be used at the time of operation should be applied and the patient watched for possible toxic effects

Among the cases included in the latter are those with evident cardiac disease exophthalmic goiter, or other disturbances of internal secretion

CONCLUSIONS

Local anesthesia is the ideal method of operating for affections of the nose and throat

None of the dangers that have been mentioned are any greater than those following general anesthesia

The question of toxicity has heretofore not been sufficiently studied, and we are grateful to the Council on Pharmacy and Chemistry of the American Medical Association for proposing this investigation, and while the preparation of this report has entailed much labor, practically constant for nine months, your committee feels that it will not have been in vain if we have thereby added to our knowledge of the causes of fatalities, thus preventing their occurrence in the future, to say nothing of the exceeding value that such formal conclusions will have to some colleague who may hereafter be confronted with one of these most distressing results

RECOMMENDATIONS

In order that our work may be constructive your committee recommends that a permanent committee on toxicity following local anesthesia be formed, with the secretary of the section as a member, and that the secretary mail a copy of these resolutions to each registered member of the section asking that reports of fatalities hereafter occurring should be promptly reported to him for further study by the committee

This would require the cooperation of every member, and in return the committee would pledge itself to present to each participating member the result of its findings in the form of a sworn affidavit for his support in the event of a fatality thereby preventing possible legal action, or at any rate providing the assurance of cooperation and support from an independent source

Your committee further recommends that a change be made from the old method of introducing new local anesthetics

The method heretofore has been that clinical data were furnished by medical men chosen by the manufacturer the Council on Pharmacy and Chemistry making its studies, and the product then if favorably reported on placed on the market We would suggest that clinical investigation should be made by clinicians of our own choosing directly after the pharmacologist has made his investigation

As such investigation requires much personal attention with careful annotation of the effects of the drug and a reasonably prompt report of the clinical investigation we would suggest that a fund be placed in the hands of the Therapeutic Research Committee to reimburse properly the physicians who are making these studies, devoting many hours of their time thereto

In presenting this report, your committee desires to state that its statements as to the advantages and disadvantages of local anesthesia are entirely impersonal, no one's individual preference is expressed, but rather a composite expression of the views now held by all rhinologists and laryngologists

No one local anesthetic is favored and a fair and impartial statement is made of the merits or demerits of each

In presenting suggestions for the methods of operating *safely under* local anesthesia we have combined those endorsed by many of the most earnest and active of our colleagues in the profession

From the great mass of evidence obtained from the writings of and many personal interviews with the clinician and the pharmacologist we have carefully sifted the evidence and based our statements thereon

Our recommendations for such improvement as may tend toward a clearer knowledge of the subject than now obtains and the institution of newer methods in the introduction of new anesthetics as against the older and more archaic methods, are our *own and express* our verdict for your consideration and approval

Finally, we recommend the use of the soluble tablets of cocain for making the solution freshly as required one to be dissolved in hot sterile water by the operator Each 240 minims of this solution makes a 0 5 per cent solution The unnecessary deaths quoted from 'mistake of druggist or "of nurse would thus be avoided

While the work of your committee has been very laborious during these many months, it has been made easier by the stimulus of the hearty cooperation, encouragement and approval of Prof Torald Sollmann, chairman of the Therapeutic Research Committee as also of Prof Robert A Hatcher, of the Department of Pharmacology of the Cornell University Medical College, whose scientific zeal and great willingness to assist and perform new animal investigations have been a source of great inspiration

Our sincere thanks are due to Dr Cary Eggleston for his cooperation in assembling the resume of the literature on animal experimentation, to Dr T F Galloway for much assistance in abstracting such literature as was suggested, to the members of this section, whose replies to the questionnaire have been of exceeding value and added much to our opportunities for study, and to the Council on Pharmacy and Chemistry of the American Medical Association, which voted a sum of money to defray the incidental and necessary expenses incurred in the preparation of this report

Your chairman wishes also to extend his personal thanks to his associates on the committee, Dr Skillern and Dr Sonnenschein, for their aid in promptly assembling the investigations assigned to them and their most hearty cooperation

If, as a result of our labor we have added to our knowledge of this important subject eventually resulting in the saving of human life, thus adding to the value of our services to humanity, your committee will feel itself amply repaid

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ABSTRACT OF DISCUSSION

DR. FRANCIS P EMERSON, Boston I move that the recommendations of the Committee on Local Anesthesia be adopted, namely that this Section endorses the plan for the investigation of new remedies by members of the American Medical Association, when the Council on Pharmacy and Chemistry has concluded its examinations, also that the Chairman appoint a permanent committee of four on the Toxic Effects of Local Anesthetics, one to be the Secretary of the Section This committee to report at the following annual meeting (Motion seconded and carried)

DR WENDELL C PHILLIPS, New York I move that in the investigation regarding local anesthesia during the next year, the committee consider the question as to whether cocain, on account of its habit forming tendencies, could not be eliminated from the pharmacopeia of the nose, throat and ear specialists I have recently been in conference with representatives of the government, and this question was raised knowing that I specialized in diseases of the nose, throat and ear I introduced this resolution in order that we may be prepared to act intelligently regarding this matter in case the authorities see our opinion

DR RUDOLPH MATAS, New Orleans I wish to commend everything the chairman of the committee said However, there is room for further investigation Let us hope that in the future some elaboration of the facts presented today will be given to us as an additional contribution General surgeons come in contact with the different anesthetics perhaps more than do the specialists The first question to be answered is what agent do we prefer We began with cocain Then came a series of new agents, some gave good service and some did not Procain is one of the best local anesthetics We use apothesin at the Charity Hospital practically to the exclusion of everything else We think that procain and apothesin are nearly in the same class From the point of view of toxicity there is no difference, but procain has, perhaps, a little more lasting effect, apothesin has a temporary effect In the beginning apothesin was not so valuable because it was irritating, but since chloretone is left out it is just as agreeable as procain I would say, however that procain is the approved local anesthetic for use in every field It is all very well to report successes and to give favorable information regarding any anesthetic, but do not fail also to state afterward when you no longer use it, that you have changed your mind or that you have been mistaken in your interpretation of results That is one great trouble about medical reports We are always ready to report our successes, but we are very reluctant to report our failures or to retract It is our duty to tell if our opinion has been changed In my early experience with quinin and urea hydrochlorid I found a greater tendency to necrosis of the tissue There was an exudate, and local effects on the tissue were marked I would not use it at all, except in certain regions about the rectum where it undoubtedly has

some advantage, where the pain lasts a long time and the duration of the anesthesia is desirable The question of preliminary anesthesia has been brought up, and the Committee doubts whether it is an advantage to give morphin and atropin as a preliminary anesthetic There is no doubt in our minds about it in general anesthesia There is no doubt that it is a mode of anociation, and the effect of quieting the patient is an immense help In certain cases of throat work I think the atropin, which is a little more dry, is better The effect of morphin or scopolamin, given one-half or three-quarters of an hour before the general anesthesia is begun, is very good I do not think anything has contributed more to the success of local or regional anesthesia than epinephrin If anything has lessened the toxicity of local anesthesia, it is the use of epinephrin It was not so much a question of dosage because we can restrict the area In this way the whole field of regional anesthesia has increased so that we can now perform operations that were impossible twenty years ago I do not think that we can pay too great a tribute to Braun and his followers for introducing epinephrin The question of sterilization is hardly relevant Cocain was most difficult to sterilize in the early days, it was done by boiling The fractional sterilization overcame that We need not worry about sterilization now because it is easily done The question of toxicity is linked with idiosyncrasy In 1883 thirty deaths from cocain were reported from Paris Reclus attempted to solve the problem why these deaths occurred He favored cocain He found that all but seven of these patients had had an excessive dosage of the drug, in seven cases the cocain itself was responsible Since that time the question of the toxicity has been relegated to a secondary place in general practice

Since we have been using epinephrin we have seen no toxic effects We use it freely The solutions have always been weak 0 5 to 1 0 per cent, and always containing epinephrin Deaths do occur, however, as the report shows There is such a thing as an idiosyncrasy to cocain, but it has almost vanished since we know more about handling it One of the chief mischief makers is the strong, 10 per cent topical application of cocain I would like to get rid of this procedure The report says that every one is agreed that nothing can take the place of cocain as a topical application I agree to that but we have found in general practice that the topical application of a strong solution of procain answers practically all purposes Of course that is a question entirely in the domain of the specialist We have no right to introduce our opinions when it comes to topical applications but it seems to me that all operations in the nasopharynx of the adult can be done with local anesthesia to the greatest advantage In doing tracheotomies or laryngectomies, where the distress is great simply inject into the larynx a few drops of procain which is quite sufficient to produce complete quiet Local anesthesia will never be popular with the amphitheater teacher, the one who has an audience He cannot separate himself from his patient, he cannot entrust that to an assistant and therefore you will not find the men working in the large amphitheaters of this country interested in local anesthesia Local anesthesia is to be used where there is quiet, when the patient is properly prepared, where there are no distracting noises, where the proper man can do his work in the proper technic For that reason it will never supersede general anesthesia The greatest lesson for the student is to see the work done, the preparation for and the giving of the anesthetic but he has to do it himself, and that can be accomplished only in small groups Then there are persons who are psychically unfit for local anesthesia, who are sympathetic, who are in a constant state of agitation Again, some persons die without having had any anesthetic given them Every one has had such an experience In one case of enlarged thyroid to be removed we tried the plan of anociassociation bringing the patient to the operating room to make her familiar with the surroundings Finally one day we thought we could try the ligation The patient was apparently quiet and composed As she was being placed on the table and before she had any anesthetic one of the attendants allowed one of the lower parts of the table to slip and it came down with a bang The report startled her, she gave a convulsive movement and was dead If we had injected cocain it might have been said to be responsible

DR CARROLL W ALLEN, New Orleans One point on sterilization might be emphasized, and that is that many agents used by rhinologists and laryngologists stand boiling badly particularly cocain It has been suggested that cocain crystals be placed in a dish absolute alcohol poured over them allowing the alcohol to evaporate, when it can be added to sterile water We find a better way is to use benzin or gasoline, because alcohol is not always destructive of all organisms What effect it may have on some of the synthetic preparations, experience will show but it does not impair the efficiency of cocain or procain Regarding quininurea hydrochlorid I endorse what Dr Matas said We have abandoned its use except for a very limited field about the anorectal region The particular subject that attracts my attention is toxicity I have had very little toxic action a little loquacity on the part of the patient was about all that could be noticed I have been called in to assist in the resuscitation of many patients Take cocain as a type Cocain is a universal protoplasmic poison It affects all protoplasm, vegetable or animal alike It paralyzes the white blood cells muscle fibers nerves of special sense as well as sensory nerves It forms a chemical combination with the protoplasm, and when broken up and liberated from the protoplasm is not liberated as cocain, but as ecgonin which has slight toxic action If the action of cocain in producing anesthesia is the result of a definite combination with protoplasm that particular part of the anesthetic from which we are getting the anesthesia cannot give a toxic action because it is fixed in the tissues When toxic action results it is because of an excess having been used over what was necessary to saturate the tissues and paralyze the nerves Of course we enter veins occasionally, and we should always observe the rule when injecting in the neighborhood of vessels to aspirate occasionally and always before making an injection of a concentrated solution Whereas I admit the existence of an idiosyncrasy to many things I have not seen one to cocain in an experience of probably twenty years Fully 50 per cent of my own work is done under local anesthesia I would advise always where the nose and throat men use a concentrated solution that they commence with a weaker solution and thus be able to recognize those cases that present an idiosyncrasy Regarding morphin it is a very useful drug as a preparatory agent Highly neurotic and excitable individuals stand cocain and other local anesthetics poorly We should try to induce in patients a phlegmatic state a state of indifference, and just enough morphin for that purpose has a very desirable action on the nervous system as well as actually preventing toxic reaction When the nerves are under the influence of morphin they are less sensitive to the action of cocain, and they respond very much less rapidly to the cocain so it takes a larger dose to produce the same effect But morphin as an antidote to cocain is perfectly useless The best antidote for cocain poisoning is ether No agent will stimulate as quickly and combat the toxic action of cocain as will ether by inhalation to the point of stimulation only

DR EMIL MAYER New York I was particularly glad that Dr Matas stated that there is everything to be said in favor of the preliminary use of morphin as a sedative and that the request of the committee that it be more generally tried should be complied with One point occurred to me when Dr Allen stated that ether is an antidote for poisoning by any of these toxic drugs If the patient is so quickly paralyzed that respiration ceases where is the ether coming in? These patients do not even breathe and it would seem to be almost impossible to have the ether do any good My own experience has shown that some men believe that hemorrhage is far more frequent after local than after general anesthesia The war had much to do with converting men to the use of local anesthesia in tonsil operations, because American laryngologists were of the opinion that hemorrhage was no more frequent after local than after general anesthesia We tried to keep our personal opinions out of the report We have merely stated the opinions of the great majority of American laryngologists

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SATURDAY, JULY 31, 1920

NEWER CONSIDERATIONS REGARDING DIABETES

It is obviously of immense importance in the management of diabetes to know whether the impairment of nutrition is inherently and inevitably progressive or whether controllable factors, among which diet is foremost, exercise a decisive influence on the weakness of bodily function Experimental investigations, notably those by Allen [1] in this country, have at length shown that virtually every detail of clinical diabetes can be reproduced in partially depancreatized dogs The resemblance is made still more exact by the susceptibility of such animals to acidosis and coma, and also by the similarity of the anatomic changes in the islands of Langerhans These animals are therefore useful test objects for a therapeutic investigation

A significant effort to determine whether a diet rich in carbohydrate is the etiologic factor in cases of diabetes in which impairment of the pancreas cannot be related to known disease processes, such as cancer or infection, was made by Thirlow and Jacob [2] They have reported that partially depancreatized dogs, remaining free from diabetes on a diet of meat, develop a fatal diabetes on prolonged carbohydrate feeding They concluded that the pancreas remnant, adequate to prevent diabetes on a meat diet, is "overstrained" by the prolonged carbohydrate diet

This fundamental contention that, when the functional remnant of the pancreas is considerably reduced, inappropriateness of diet may determine the onset of a disease having glycosuria as its prominent symptom, has since been established more firmly by the large number of experiments recorded by Allen from the Hospital of the Rockefeller Institute for Medical Research He has further shown that the diabetes may be initiated or aggravated in the potential cases by overfeeding with foods other than carbohydrates Sugar is formed in the organism from protein as well as more directly from starch According to Allen, the downward progress of individuals having a minimum of functional pancreatic gland may be due to excessive diet of almost any sort The outcome, on Allen's hypothesis, is the result of food injury resulting in an overstrain of the pancreas as an endocrine organ Allen [3] finds that in the early stage glucose is more powerful than starch in producing diabetes, and animals which are progressing toward complete recovery on a starch diet can be sent into hopeless diabetes by the admixture of glucose The difference seems to be merely of the rate of absorption, and indicates that a rapid flood of carbohydrate is more injurious to the pancreatic function than a slow absorption Whenever permanent diabetes is present, so that complete recovery is impossible, starch brings on glycosuria more slowly than sugar but just as surely The difference in time in different cases amounts to days, weeks or months The clinical lesson from such experiments is that even if a patient becomes free from glycosuria on withdrawal of sugar only, nevertheless other foods should also be limited No significant differences were observed between the assimilation of different starches, or any extreme lowering of the carbohydrate tolerance by proteins, such as alleged by certain writers in connection with the "oatmeal cure" No specific differences were observed between the glycosuric effects of the different kinds of protein [4]

The most promising feature of Allen's recent work is the demonstration,[5] if it can be accepted as such, that there is no inherent progressiveness in the diabetic tendency in its early stages With appropriate restrictions in the diet, animals exhibiting a state of potential diabetes through deprivation of part of their pancreatic tissue could be caused to gain in tolerance and to maintain a condition of health Further evidence that injurious changes were not in progress was furnished by the intact state of the islands of Langerhans in the residual pancreatic gland However, when the capacity to metabolize is strained by overfeeding, as is so often done in attempts to preserve or increase the weight of human diabetics, disaster inevitably follows Allen states that every detail of the downward progress of human patients on various diets is reproduced in such animals They lose assimilation and die most rapidly on diets rich in carbohydrate, and less rapidly on excess of other foods The differences between sugar and starch, and between starch and protein, seem to be only those of degree and time rather than anything absolute The important point is that, granting the absence of spontaneous downward tendencies as stated, all the different kinds of downward progress are purely the results of overstrain of the internal pancreatic function by excess of food

1 Allen F M Studies Concerning *Glycosuria* and Diabetes Cambridge 1913 Numerous later papers will be found in the Journal of Experimental Medicine **31** 1920

2 Thirlow and Jacob Bull et mem Soc med d hop de Paris Series 3 **29** 492 1910 **30** 29 636 Comp rend Acad d Sc **154** 154 1912

3 Allen F M Experimental Studies on Diabetes 1 Production and Control of Diabetes in the Dog 2 Effects of Carbohydrate Diets J Exper Med **31** 381 (April) 1920

4 Allen F M Experimental Studies on Diabetes 3 Effects of Protein Diets J Exper Med **31** 555 (May) 1920

5 Allen F M Experimental Studies on Diabetes 4 Control of Experimental Diabetes by Fasting and Total Dietary Restriction J Exper Med **31** 575 (May) 1920

Admitting the facts just noted, it should be remarked, however, that the validity of the theory of the production of the pancreatic impairment as a direct result of physiologic "overstrain" has been questioned by Jensen and Carlson [6] These Chicago investigators point out that many other organs, such as the thyroid and the kidneys, respond by hypertrophy rather than atrophy when they are reduced in volume and called on for more than the usual amount of performance They admit, in harmony with other observers, that when the functional capacity of the pancreas remnant is too small to prevent diabetes, the residual tissue undergoes virtually no hypertrophy, but they allege that this failure may be due to the unfavorable influence of the diabetic condition on growth in general, rather than to specific "overstrain" of the pancreas remnant Whatever the correct hypothesis may be, the favorable effects of partial undernourishment in the management of many diabetic patients can no longer be denied

PELLAGRA IN EGYPT

It is an interesting coincidence, likely to contribute to medical progress, that during the course of the extensive investigations of the United States Public Health Service on the occurrence and possible causes of pellagra in this country, somewhat comparable studies have been undertaken by British authorities in Egypt In a recent issue of THE JOURNAL,[7] it was pointed out that the facts ascertained during the last few years, notably by Goldberger [8] and his associates, are decidedly antagonistic to the view of a pellagra infection, but are favorable to the long alleged relationship between diet and disease In the judgment of the American workers who believe that they have actually been able to produce pellagrous symptoms in volunteer subjects by the administration of faulty diets similar to those commonly consumed in families in which the disease occurs, several dietary factors may be involved The possibilities that are foremost in their suggestions are an amino-acid deficiency, such as may be occasioned by a diet low in protein of poor quality, faulty mineral supply or constitution, and perhaps an as yet unknown vitamin factor What combination or combinations of these deficiencies really constitute the specific pellagra-producing defect remains to be accurately determined In their feeding experiments on man, Goldberger and Wheeler observed that scrotal lesions are much more common early skin manifestations of pellagra than has heretofore been realized They suggest that the site of at least the initial dermatitis accompanying an attack is bound up with a specific quality of the diet Indeed, the view is further advanced that there may exist essential differences in the intimate make-up of the diet corresponding to observed differences in some, at least, of the clinical types of the disease

In 1918 there were many prisoners of war in Egypt, among whom pellagra appeared to an alarming extent Both Turkish and German prisoners were attacked The committee of inquiry appointed by the British government to examine the situation filed a report, of which some details have recently appeared,[9] along with reports by some of the medical officers who studied the outbreak [10] The magnitude of its occurrence can be gaged by the statement that one physician alone saw about 2,000 clinical cases and actually performed necropsies in 300, during three years' residence in an Egyptian hospital for prisoners of war There was no evidence of a primary specific bacterial or protozoal infection, but intercurrent infections account for virtually all of the deaths Spot maps showed that there was no infection from place or person Notable is the fact that the disease occurred in Turkish camps, not—so the report asserts—to any noteworthy extent in the camps of Germans alongside, where there was money to buy extra food In the diet of the Turkish prisoners who had suffered from long-continued undernourishment, the protein came mostly from wheat, barley or maize, with very little from meat The implication is that a prime factor in the causation of the disease observed in Egypt was a defective protein supply We shall not suppress the fact that, as among our American investigators some continue to adhere tenaciously to the possibility of an infectious genesis of pellagra, so there are among the foreign observers a few, like Enright,[10] who are unwilling to accept the food deficiency theory All in all, however, with so much unanimity in the current American and British scientific opinion regarding pellagra, the discovery of the precise pathogenic factors is almost certain to follow, even now, the path of dietary safety seems to be quite clearly outlined

DYE WORKERS' CANCER, AN IMPORTANT INDUSTRIAL DISEASE

In any consideration of the general problem of the etiology of cancer, one of the important, outstanding features of comparatively recent development is the fact that chemical irritation is quite as potent as mechanical irritation in producing malignant growths Indeed, the classical illustration of cancer production by mechanical irritation in the case of the chimney sweep is now generally believed to illustrate rather the

6 Jensen V W and Carlson A J The Apparent Influence of a Diet of Carbohydrates on the Pancreas Remnant of Partially Depancreatized Dogs Am J Physiol 51 423 (April) 1920

7 Pellagra editorial J A M A 74 1520 (May 29) 1920

8 The latest review of this work supplementing the references given in the editorial mentioned (Footnote 1) will be found by Goldberger Joseph and Wheeler G A Experimental Pellagra in White Male Convicts Arch Int Med 25 451 (May) 1920

9 Pellagra in Egypt in 1918 Lancet 1 1027 (May 8) 1920 Pellagra in Egypt During the War London Letter J A M A 74 1658 (June 12) 1920

10 Bigland A D The Pellagra Outbreak in Egypt I Pellagra Amongst Ottoman Prisoners of War Lancet 1 917 (May 1) 1920 Enright J I II Pellagra Amongst German Prisoners of War Observation upon the Food Factors in the Disease ibid 1 993 (May 8) 1920 Pellagra and Diet editorial ibid p 1019

effects of chemical irritation by products of the destructive distillation of wood and coal Paraffin workers' cancer is now an accepted reality, and the only successful production of experimental cancer by artificial agencies is that of Yamagiwa with his rabbit ear epitheliomas produced by applications of coal tar When, in 1895, Rehn announced to the German Society that cancer of the urinary bladder was observed with especial frequency among workers in anilin dyes, he not only pointed out an important situation in relation to industrial diseases but also called attention to a very significant point in connection with cancer etiology Although he based his statement on but three observations, nevertheless, his conclusions, which were criticized as premature by many, have since been found to be entirely correct Several other surgeons in districts where large dye factories exist have since corroborated this striking fact, and in an extensive discussion of the subject from the clinical and the chemical side Nassauer [1] finds reports of eighty-nine cases of bladder cancer occurring in anilin dye workers To these should be added sixteen of the twenty cases recently reported by Oppenheimer,[2] four of his cases apparently having been included by Nassauer

One of the striking things about these tumors is the long interval between the first exposure of the workman to the dyestuff and the appearance of the first symptoms of cancer Ordinarily this is more than ten years, most usually about fifteen years, and in some as late as twenty-eight years, but in one case cancer developed in two years In many instances the cancer has developed in workmen who have been engaged in other than dye work for a period of ten years or more While this seems to indicate that the early injury to the bladder persists until cancer develops, it must be considered that part, at least, of this apparently long incubation period may depend on the fact that commonly the first exposure begins before the subject has reached an age at which cancer is likely to develop Even as it is, the age incidence is low, most of the victims being between 34 and 47 years old Because of the shifting of workmen and the long period of incubation, it is not possible to state how large a proportion of men exposed to this danger develop cancer, or for how long a time they must be exposed in order to be jeopardized Nassauer states that the twenty-eight cases he has studied occurred in a plant employing about 105 workmen, and he intimates but does not state specifically that not many of these workmen were transients Oppenheimer believes that the incidence is even higher than this

Nassauer is of the opinion that it is unsafe for men to be exposed to the more dangerous substances for more than three months, but believes that with proper hygiene in respect to cleanliness of person, and especially with the installation of necessary devices to prevent unnecessary contact, the danger can be largely if not entirely avoided In the factory in which he has observed so many cases, such precautions were introduced in 1905, and not a single case has been observed in workmen who began dye work in the fourteen years that have elapsed, although he admits that in view of the long incubation period it is not fully established that the danger has been entirely avoided He also calls attention to the fact that numerous cases of bladder cancer have been observed in people living in the immediate vicinity of dye works, although they themselves were not occupied in the plants, a circumstance which he believes is significant, although it is not possible to establish the etiologic relation of the dye works to the disease in these cases

Taken from the other point of view, controlling the conclusion that the dyes are responsible for the bladder cancer is the fact that in the series of cases of bladder cancer in which operation was performed at the university clinic at Basel from 1901 to 1910, of sixteen cases of bladder tumor twelve occurred in persons working with dyes Furthermore, in the forty preceding years, only six cases of bladder cancer were treated in this clinic, presumably because of the long period of incubation required to produce cancer after the first installation of anilin dye factories in that city In the surgical clinic at Frankfort, from 1895 to 1918, inclusive, there were observed ninety-two cases of bladder tumors, twenty-two of these occurred in dye workers, and in twenty-four the history does not exclude relation to dye work Eliminating these twenty-four cases as uncertain, twenty-two cases of bladder cancer occurred in dye workers and forty-six in men known not to have been engaged in this occupation certainly a striking proportion in a community such as Frankfort, where only a very small proportion of the male population is employed with dyes

As to the particular chemicals and dyes which are responsible for the production of cancer, it is rather difficult to draw conclusions since most of the patients have been exposed to many substances Nassauer discusses this problem at length It has generally been believed that anilin itself and benzidin were most probably the important agents Nassauer is convinced from his own observation that the anilin alone is responsible If this is correct it will greatly simplify the avoidance of this menace in dye workers As yet no experimental evidence has been obtained as to the production of tumors by anilin or other chemicals used in the dye industry, and probably until that is done it will be difficult to reach positive conclusions Cancers outside the urinary tract are not observed among dye workers with any noticeable frequency

During the war there was a great increase in work which involved exposure to anilin, and in addition

1 Nassauer Max Ueber bosartige Blasengeschwulste bei Arbeitern der organischen chemischen Grossindustrie Frankfurt Ztschr f Path 22 353 1920

2 Oppenheimer Munchen med Wchnschr 67 12 1920

many women were engaged in work leading to contact with aniline Time alone will tell whether this war work will produce new cases of bladder cancer Oppenheimer was unable to find that the duration and intensity of the exposure to the injurious substances had any influence on the production of cancer Presumably the aniline may be absorbed through either the skin or the respiratory tract and possibly also by swallowing dust and vapor which enters the mouth No particular type of bladder tumor is characteristic for the dye workers, both papillary growth and ulcerating carcinoma being found, and the prognosis with the malignant tumors is very unfavorable No publications on dye workers' cancer seem to have appeared in the United States, although paraffin workers' cancers have been observed here[3] With the recent development of the dye industry in the United States, this particularly serious industrial disease must receive consideration

Current Comment

INTERNAL FIXATION OF FRACTURES

With the advent of aseptic surgery, it became possible to perform open operations on bones with relatively slight danger of infection This encouraged operators to treat a large proportion of fractures by one form or another of internal splint rather than trust to the classic methods of reduction and fixation There has been much debate as to the indications for open treatment, at present, opinion on that point appears to be well settled, and discussion now is as to the kind of material that shall be used as the splint The indications for internal fixation may be grouped as fractures in which there is failure either to obtain or to maintain reduction by the older methods, and ununited fractures Usually cases belonging to the first group are identified by the method of trial and failure, occasionally by the results of previous experience Operation is indicated in the former group primarily to correct deformity, in the latter group, nonunion itself is the indication In the first group, it is the rule that union will occur, if reduction is maintained, independently of the type of material introduced for fixation, in the second, there are grounds for believing that an autogenous bone graft is superior to anything else Thus, in cases in the first group, the choice of the splint will be determined by the mechanical advantage which the type chosen offers In spiral fractures, silver wire or Parham-Martin bands may meet all indications, transverse fractures may require Lane plates or, possibly, intramedullary pegs of boiled ox bone With the second group, however, the invigorating influence of fresh, osteogenic cells in a living autogenous transplant, appears to play a part that no inanimate material can supplant It has been proved that, while the deeper portions of such bone transplants, removed from contact with an efficient blood supply, die, many of the superficial cells, being bathed in the nutrient plasma of the contiguous tissues, survive and thus form the centers from which regeneration of the transplant, and the supposed stimulation of the inactive osteoblasts at the site of nonunion, proceed While the foregoing statement is probably representative of the consensus of current ideas on this subject, there is evidence which suggests that perfect apposition and fixation are the paramount requirements, and that the apparent stimulating effect of a living autogenous transplant is merely an apparent effect and not real The autogenous transplant has been accorded a second advantage in that it has not been regarded as a foreign body in the same sense as a steel plate or a piece of silver wire Most autogenous transplants heal in place without destructive reaction, many of the metallic splints require subsequent removal On the whole, it may be safely concluded that the essentials of the internal fixation of fractures are now established, further development is likely to be in the direction of the refinement of methods

FATALITIES FROM LOCAL ANESTHETICS

Nothing in medical practice is more serious than the death of a patient within two or three minutes after the injection of a local anesthetic especially when the patient is in excellent health except for a condition requiring some minor operation In view of the frequent employment of local anesthesia, it is apparent that even though the relative number of such accidents is low, in the aggregate the problem merits serious study Efforts to reduce the dangers arising from the administration of local anesthetics have been hampered by limited knowledge as to the cause and mechanism of these unfortunate occurrences From time to time appeals have been made to the profession at large to report the clinical manifestations following the injection of a toxic anesthetic but the response has been poor The Council on Pharmacy and Chemistry therefore asked the Section on Laryngology, Otology and Rhinology to appoint a special committee to make a comprehensive study on the use of anesthetics in nose and throat work The summarized report of this committee appears elsewhere in this issue As is pointed out, the occurrence of twenty deaths in the personal experience of 100 operators shows that the subject deserves more earnest attention Real progress, however, can be made only if cases are reported promptly and with attention to the factors that are in question As an illustration of the immediate practical benefit that could follow this inquiry, it is worthy of note that a fourth of the deaths so far reported to this section arose from mistake in solutions These can probably be avoided by preparing the cocain solution only as needed from tablets colored with a distinctive dye so that the tint of the solution at once would call attention to the drug and its concentration Physicians are urged to cooperate by reporting cases of idiosyncrasies, to the end that further study will result in definitely establishing the causes of sudden death and that a better understanding may be attained as to the proper technic and proper choice of local anesthetics for each particular class of cases

3 Davis B F Paraffin Cancer J A M A 62 1716 (May 30) 1914

THE ALLEGED MECHANICAL FACTORS IN THE PRODUCTION OF ALTITUDE SICKNESS

Although Paul Bert, as early as 1878, furnished clear experimental proof that the abnormal symptoms and physiologic dangers experienced by persons at considerable altitudes are due to imperfect aeration of the blood with oxygen, this chemical theory of altitude sickness did not find universal acceptance The Italian physiologist Mosso, who made many experiments in the high Alps, developed the acapnia hypothesis, which attributed many of the symptoms to a lack of carbon dioxid, while the Bernese physiologist Kronecker invoked mechanical factors as the cause of mountain sickness [1] The latter investigator believed that a diminished atmospheric pressure brings about disturbances in the pulmonary circulation, quite overshadowing the partial reduction of the oxygen in the effect on the organism At Kronecker's suggestion, Rosendahl [2] placed animals under reduced barometric pressure until severe symptoms appeared, whereupon he restored the pressure with nitrogen gas and observed a revival of his experimental subjects This outcome made it appear, indeed, as if the lack of oxygen were of secondary consideration at most under the conditions instituted to imitate the low barometer of high altitudes A repetition of the investigation by Rippstein [3] in the physiologic institute at Berne has at length brought the results in harmony with the current belief that the essential cause of altitude sickness is lack of oxygen A mechanical influence of barometric environment on the pulmonary vessels does not manifest itself except when extremely low atmospheric pressures are reached

THE NURSING PROBLEM

In his series of articles on Central and South America, the first of which appears in this issue of THE JOURNAL, Dr Mayo calls attention to the nursing problem as he witnessed it in the Canal Zone He speaks as one who has intimate knowledge of the value of the trained nurse and also as one who has observed the serious effects of the shortage of nurses for the general public He emphasizes, as THE JOURNAL has done, the fact that a highly trained nurse is not necessary in the vast number of cases of ordinary illness What is needed in such cases is an intelligent woman who has knowledge of the ordinary elementary facts of hygiene and care of the human body combined with good common sense As Dr Norman Bridge recently said in his commencement address before the graduates of Rush Medical College "Any bright girl can be taught in sixty days to take temperature, pulse and respiration accurately, to prepare and administer invalid diet, to administer drugs in numerous ways to give baths and fomentations, and attend to the personal wants of the invalid and to keep accurate records of the patient, and of her own doings"

1 Reviews of the earlier studies are given by Mosso A L homme dans les hautes Alpes Zuntz Loewy Muller and Caparı Hohenklima und Bergwanderungen in ihrer Wirkung auf den Menschen Berlin and Stuttgart Bong & Co 1906 Kronecker H Die Bergkrankheit Vienna 1903 Cohnheim O Physiologie des Alpinismus Ergebn d Physiol **2** and **12** Staubli E Das Hohenklima als therapeutischer Faktor Ergebn d inn Med u Kinderh **11** 1913

2 Rosendahl Verminderter Luftdruck totet nicht durch Sauerstoffmangel Ztschr f Biol **52** 16 1909

3 Rippstein E Experimentelle Untersuchungen uber das Wesen der Bergkrankheit Biochem Ztschr **80** 163 (March) 1917

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATIO PUBLIC HEALTH, ETC)

ILLINOIS

Clinics—Under the charge of Dr Clarence W East, Springfield, head of the division of child hygiene of the state board of health, twenty-two clinics for crippled children have been established in Illinois with a total attendance of 1,600

Interest in Chiropractor Injunctions—As a result of a recent editorial in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, the Department of Registration and Education of the State of Illinois has received inquiries from New York, Ohio Indiana, Missouri, Oklahoma, Rhode Island and South Carolina, relative to the methods pursued in securing injunctions against unlicensed chiropractors

Chiropractor Fined—K H Mandel, a chiropractor at Nashville, was arrested by the Department of Registration and Education of the State of Illinois, for practicing without a license and on July 19 was fined $300 and costs which he paid Mandel was originally located at Mascoutah, St Clair County One of the inspectors of the department found him practicing there without state authority and filed seven informations against him in one of the courts of St Clair County Mandel heard of this and fled from St Clair County before the sheriff could get service on him His whereabouts were unknown for a few weeks but he was again located in Nashville When arrested, he seemed very much surprised that the state of Illinois should undertake to stop him in his practice He appealed to friends, to the officers of the department and finally wanted to plead guilty, pay a fine of $200 and go ahead and practice This offer was declined He then said he would fight the case, but when it was called for trial, he had no desire to fight, and pleaded guilty State's Attorney House of Washington County was active in the prosecution of this case

Chicago

Personal—Dr Frank Allport has recovered from an illness of several weeks and has returned to Chicago——Dr Norman Bridge is convalescent after an illness of more than a month

Sells Medical Diplomas—It is reported that a Japanese, named T'Aso, recently pleaded guilty in court of selling certificates of the Chicago Hospital College of Medicine for $250 each A raid of T'Aso's room is said to have uncovered sixteen blank diplomas, seals, stamps and other paraphernalia

INDIANA

New Hospital—The Cass County commissioners have authorized the hospital board to purchase grounds for erecting a county hospital at Logansport at a cost of $100,000

Physician Exonerated—In the suits filed against Dr Elbridge G Ricker Monticello, for his alleged failure to report cases of smallpox based on the affidavit of Dr Henry W Greist, Dr Ricker has been completely exonerated

KENTUCKY

Correction of Speech Defects—As the result of a two weeks school for correction of speech defects conducted by the Louisville Board of Education and given to teachers in Louisville public schools, two white teachers and one negro teacher are to be selected to conduct the course for the benefit of children so afflicted

McCormack Memorial—At a recent conference of city and county health officers of Kentucky a movement was inaugurated to establish as a token of friendship and esteem a memorial of the labors and activities of Dr Joseph N

McCormack, Bowling Green, the originator of the latter-day public hygiene and author of virtually all the health laws which have been incorporated into the statutes of the state and an indefatigable worker on the general betterment and uplift of the whole social fabric It is proposed to have made a life-sized portrait of Dr McCormack to be presented at the annual meeting of the Kentucky State Medical Society

Personal—Dr John Walker Moore has recently been elected professor of research medicine in the medical department of the University of Louisville on an all-time basis ——Dr Frederick A Stine Newport, was sworn in July 12 as a new member of the state board of health, succeeding the late Dr Isaac A Shirley, Winchester —— Dr Oscar Dilley was sworn in on the same day as a member representing the state board of pharmacy ——Dr Percy K Holmes has been placed in charge of the new department of public health and hygiene of the University of Kentucky, Lexington ——Dr Edward J Murray formerly superintendent of the Blue Grass Sanatorium Lexington, has been appointed superintendent of the Hazelwood State Tuberculosis Sanatorium Louisville ——Drs J C Sullivan, Mayfield and Thomas B House, Hopkinsville, assistant physicians at the Western Kentucky Hospital for the Insane, Hopkinsville have resigned ——Dr Louise B Miller third assistant physician in the institution has been succeeded by Dr Mary C McClelland, New York ——Dr Lindsey Morrison, West Point, has been appointed physician at the Frankfort Reformatory, succeeding Dr Richard H Moss, Hodgenville

MAINE

Centenarians in the State—The weekly news letter of the Maine Department of Public Health of July 5 is devoted to Maine centenarians Six persons died in Maine during 1919 who had attained the age of 100 years or more and since 1892, when Maine was admitted to the registration area there have been 154 deaths of centenarians, an average of five deaths annually, the largest number in a single year was twelve in 1916, while during 1904 1913 and 1917, the death of only one centenarian was reported

MARYLAND

Seek Aid in Securing Physician—The state board of health has been called on by V M Moreland of Millersville, Anne Arundel County, to aid the citizens of that section in getting a physician to establish residence and office in that community There is not a physician within a radius of 9 miles of Millersville except the medical officers at Camp Meade

Health Officers Tour State—State health officers have adopted a new policy of canvassing the state more thoroughly and more frequently that they may become acquainted with the county officials and come in more direct contact with health problems confined to particular communities At present nearly every officer, including Dr John S Fulton, secretary of the board is in some section of the state either on health work or studying conditions Dr Fulton has for some time been helping to work out a system which will give one or two Red Cross nurses to every county in Maryland

MASSACHUSETTS

Personal—Dr Charles E Perry Northampton, has been appointed county treasurer to fill an unexpired term

Social Service Courses—The American Red Cross in order to meet the need of the U S Public Health Service is offering courses in psychiatric social work at Smith College Training School for Social Work Northampton and in medical social service work at the School for Social Work Boston At the former there is a tuition fee of $50 but the tuition at the Boston school is free

Child Welfare Station Established—A public clinic and child welfare station was established at Fitchburg early in June and since that time eighty babies have been registered Plans are now in progress to open a second station at the police station on Daniel Street Dr Herbert Jacques will be on duty at the new station assisted by Miss Dorris Halloran of the Visiting Nurse Association

MONTANA

Health Officers Meet.—At the annual meeting of the Montana Public Health Association held in Helena July 11 and 12 the following officers were elected president Harry Call vice president Dr Albert R Marco Miles City secretary Dr William F Cogswell Helena and the following officers were elected by the public administrative section of the association president Dr Harmon T Rhoads Choteau vice president Dr George A Lewis Roundup, and secretary Dr John J Sippy, Helena

New State Officers.—The forty-second annual meeting of the Montana State Medical Association was held in Helena July 14 and 15 under the presidency of Dr Edward M Larson Great Falls Billings was selected as the next place of meeting and the following officers were elected president Dr Creswell T Pigot Roundup vice presidents Drs Patrick H McCarthy Butte Louis H Fligman Helena and Harry J McGregor Choteau and secretary-treasurer Dr Elmer G Balsam, Billings (reelected)

NEW HAMPSHIRE

New State Officers—At the annual meeting of the New Hampshire Medical Society the following officers were elected president Dr Alpha H Harriman Laconia, vice president Dr Charles S Walker Keene secretary-treasurer and delegate to the American Medical Association Dr Dennis E Sullivan, Concord, alternate Dr Herbert K Faulkner, Keene

NEW JERSEY

New State Board Officers—At the meeting of the state board of health at Trenton, for reorganization Dr J Oliver McDonald Trenton was elected president and Dr Henry Spence Jersey City, vice president

Bergen County Hospital—Building is now in progress on two new hospital pavilions one for tuberculosis and one for contagious diseases These two units with equipment from a recent appropriation of $300 000 by the Bergen County Board of Freeholders will be a substantial addition to the present County Hospital group They are the result of a well developed plan formulated by the Board of Freeholders medical board and county medical society in conjunction with an advisory board consisting of a number of citizens of the county

NORTH CAROLINA

Licenses Issued—At the recent annual session of the state board of medical examiners in Raleigh seventy-four were licensed on examination and forty-three by reciprocity Twenty-five second year students took the examination on the primary branches ——Forty-three states have established reciprocal relations with North Carolina

Examiners Elect Officers—The board of medical examiners recently elected at the annual session of the state medical society met recently and organized electing the following officers president Dr Lester A Crowell Lincolnton, secretary-treasurer Dr Kemp P B Bonner Morehead City examiner in anatomy and embryology Dr Lester A Crowell Lincolnton, in chemistry hygiene and physiology Dr William M Jones Jr Greensboro in histology bacteriology and pathology Dr Clarence A Shore Raleigh in surgery Dr Lucius N Glenn Gastonia in materia medica therapeutics and pharmacology Dr John G Murphy Wilmington in practice of medicine Dr William P Holt Duke and in obstetrics gynecology and pediatrics, Dr Kemp P B Bonner, Morehead City

NEW YORK

New Hospital—A new community hospital is to be built at Dansville and $100 000 has been raised for that purpose

State Buys Radium—The state of New York has purchased 2½ grams of radium to be used in the research work in the State Institute for Malignant Diseases Buffalo The radium was obtained from carnotite ore found in the Colorado desert

Typhus Precaution Holds Up Steamer—The Cunard steamer *Imperator* which arrived from Cherbourg, July 11 was held in quarantine because it is alleged the steamer failed to comply with the quarantine regulation at Cherbourg Some of the steerage passengers who came from countries where typhus fever is epidemic were sent to Hoffman Island for observation

New York City

New East Side Clinic—A free clinic and dispensary for children has been opened at 26 Roosevelt Street by the American Free Milk and Relief for Italy The clinic will be conducted by Dr Francesco Fortunato assisted by a nurse and voluntary workers

Irrelevant Charges Quashed — Supreme Court Justice Squiers struck out as irrelevant and scandalous all but twelve of the 111 paragraphs contained in a suit brought by an attorney against Dr George B Wix, Manhattan, to recover $7,500 for attorney's fees

Physician Convicted of Manslaughter—A sentence of from three to fifteen years has been imposed on Dr Julius Hammer, who was recently convicted of manslaughter in the first degree following the death of a woman on whom he is alleged to have performed a criminal operation

Rest Home for Nurses—A rest home for nurses who have served with the Red Cross, Army, Navy or U S Public Health Service has been opened at Bay Shore, L I, under an appropriation by the national headquarters of the American Red Cross It has accommodations for twenty-six nurses seeking relaxation after war or epidemic work

Appropriation to Guard Against Epidemics—Health Commissioner Royal S Copeland has obtained from the board of estimate an appropriation of $80,000 to prepare against possible epidemics of smallpox, cholera, plague and typhus such as are raging in parts of Europe In urging that the appropriation be made immediately Dr Copeland stated that several cases of smallpox had been discovered among passengers on incoming vessels, and that while there is no imminent danger, conditions are serious enough to warrant immediate action

Classes for Crippled Children—A request was made for $258,245 for the maintenance of classes for crippled children in the public schools This amount was reduced by the board of estimate to $44,000, and the number of classes has had to be reduced from the thirty-six requested to nine Provision has been made for five additional classes for children with speech defects in the elementary schools and for three additional classes in the high schools A class for the instruction of prospective teachers for correction of speech defects has been allowed in each of the training schools for teachers

Physician Sues to Test Dry Law—Dr Melville A Hays claiming that 100 liquor prescription blanks every three months is not at all times sufficient for legitimate practice on July 20, obtained an order from Federal Judge John C Knox, through his counsel, Thomas F Franklin requiring the Federal Prohibition Director for the state of New York to show why he should not issue additional blanks to Dr Hays Judge Knox declared in the federal district court that he had no jurisdiction in the case of Dr Hays, and denied his petition for a new supply of blanks, inasmuch as he had used three books of 100 blanks in February March and April When he applied for the fourth book in May it was refused In upholding the action of the federal prohibition director, Judge Knox said the way to obtain relief was to file a suit in equity and if this warranted it the court could then grant the request made on behalf of Dr Hays

The Hammer Case—The secretary of the Bronx County Medical Society writes to the effect that the item in THE JOURNAL two weeks ago, to the effect that four hundred physicians had signed a petition asking for clemency in the case of Dr Julius Hammer was not correct, he sends the following resolutions, which were adopted by the Committia Minora of the Bronx County Medical Society and sent to the district attorney for his information

A special meeting of the Comitia Minora of the Bronx County Medical Society was called this day at the office of the Secretary

This action was taken in view of the publicity that was given to the case of the People vs Dr J Hammer and the appearance of the names of several of the members of the Bronx County Medical Society, in the newspapers in connection with this case

The following resolutions were adopted at this meeting and the Secretary was requested to forward them to the office of the District Attorney for his information

1 That Dr J Hammer is not and never has been a member of the Bronx County Medical Society

2 That no member is authorized to use the name of the Society in any way in connection with this case

3 That the matter of Dr J Hammer's conviction has never come before the Society or the Comitia Minora for discussion previous to this date

4 That the Bronx County Medical Society through the Comitia Minora desires to go on record as upholding the laws of this state and country as interpreted by the courts

OHIO

Personal—Dr Frances M Hollingshead, Cincinnati, director of the Division of Child Hygiene in the Ohio State Department of Health, has arrived in Buffalo to take up her duties as director of the Buffalo foundation

New Medical Journal—The first issue of the *Bulletin of the Academy of Medicine of Cleveland* was issued July 9 It voiced the opposition of the academy to compulsory health insurance for Ohio, chiefly on the grounds that it has proved a failure in England and Germany

Physicians in Trouble—Dr William A Charter, Marion, recently discharged from the Ohio State Penitentiary after winning a new trial, is said to have been returned to the penitentiary, July 3, following a second conviction of the performance of an illegal operation——In the case of George F Lee, Sandusky, charged with violation of the Harrison Narcotic Law, the jury is said to have found the accused guilty, and he was sentenced to pay a fine of $1 000 and costs, and to serve a term of three months in the Richmond County Jail ——The federal prohibition director announces the revocation of the permit to prescribe liquor for medicinal purposes issued to Dr Charles F Hera, New Richmond——B W Pearce charged with violation of the Harrison Narcotic Law, is said to have pleaded guilty, June 18, and to have been sentenced to imprisonment for one year in the United States Penitentiary, Atlanta, Ga

OREGON

Personal—Dr Philip L Newmyer, Chemawa has been employed by the state board of control as assistant physician at the State Tuberculosis Hospital——Dr Edwin G Kirby, Elgin, has purchased an interest in the Grande Ronde Hospital, LaGrande

New State Officers—At the annual meeting of the Oregon State Medical Association held June 2 to 5 the following officers were elected president and delegate to the American Medical Association Dr Joseph A Pettit, Portland, president-elect, Dr Clarence J McCusker, Portland, vice presidents Drs Benjamin A Cathey Condon, Harvey J Clements, Salem and Richard H Wellington, Portland secretary Dr Raymond E Watkins Portland, and treasurer, Dr Jessie M McGavin, Portland (reelected)

PENNSYLVANIA

Personal—Dr Larry D Sargant has been appointed chief of the State Tuberculosis Clinic at Washington——Dr Frank F D Reckord Harrisburg, for five years associate director of the tuberculosis division of the Pennsylvania State Department of Health, has resigned and will resume practice

Philadelphia

Personal—Dr Morris Smith has been appointed laryngologist, and Dr John D Donnelly pediatrician at the State Tuberculosis Clinic——Dr William W Keen, professor emeritus of surgery at the Jefferson Medical College president of the International Surgical Society in conference at Paris, presided at the opening sessions

Portable Health Clinic Established—The Philadelphia Health Council and Society for the Prevention of Tuberculosis has established a portable health clinic in conjunction with the Department of Public Welfare, ten of whose recreation buildings are being used as centers Dr Robert A Schless is conducting the clinic for boys and Dr Jeanette H Sherman the clinics for girls

Jefferson Medical College to Dedicate Memorial—The Alumni Association of Jefferson Medical College has planned to dedicate a memorial to the graduates who gave their lives in the service of their country during the great World War A large bronze tablet, bas-relief, 5 feet high by 4 feet wide, appropriately decorated and engraved with the names of the men who gave their lives in the service, is to be placed in the main entrance to the college building at Tenth and Walnut streets The dedicatory ceremonies will be held in the college building on Thursday evening, October 7, at 8 p m Addresses will be made by the Hon William Potter, president of the board of trustees, Jefferson Medical College, Dr S Solis Cohen president of the Alumni Association Jefferson Medical College, and by representatives from the U S Army and Navy Medical Departments Jefferson Medical College was represented during the World War by 1,147 of its graduates in the Army and Navy Medical Service Sixty-five per cent of the graduates for the five years preceding 1918 were in the service and 60 per cent for seven years preceding 1918 served in some department of the Army or Navy In the class of 1916, 103 were represented, in the class of 1917, ninety-four were represented and in the class of 1918, ninety-one were represented Four hundred and thirty-one were represented in the student army training corps 398 were in the Army and thirty-three in the Navy Graduates from every state in the Union were represented in this

number and representatives of every class for the last forty-four years were included in the service Twenty-five graduates gave their lives for their country

SOUTH CAROLINA

District Society Meeting—The annual meeting of the Eighth District Medical Association was held in Allendale July 2 Bamberg was selected as the next place of meeting, and Dr Joseph S Palmer, Allendale, was elected president, and Dr G W I Loadholt, Fairfax, vice president

Personal—Paul E Knotts Gaffney has assumed his duties as health officer of Cherokee County——Mr Clarence E Smith, who resigned recently as city health officer of Columbia, on leaving for his duties as health officer of Greenville was presented by the City Board of Health of Columbia with a silver filigree tobacco jar

TEXAS

Bubonic Plague—The state department of health and the U S Public Health Service working in cooperation have practically completed the bubonic plague survey in Jefferson County and plan to extend their work to other sections of the Texas coast quarantine area No new cases of bubonic plague have developed in Beaumont

Health Survey of Schoolchildren—A survey of the health of schoolchildren in a north Texas town has recently been completed by Miss Pearl N Heyer R N public health nurse of the Texas Public Health Association Examinations of 729 children were made by Miss Heyer, assisted by local physicians and 1 656 defects were found Of these children, 297 had enlarged tonsils 31 submerged tonsils, 122 disease of the eyelid, 97 adnoids, 150 needed glasses, 136 had defective hearing, 385 needed dental care, 119 had diseased gums 20 were more than 10 pounds overweight, and 299 were 5 pounds or more underweight

WISCONSIN

Personal—Dr George V I Brown Milwaukee has been appointed president of the Tri-State District Medical Society succeeding Dr Walter B Helm Rockford deceased Dr Joseph S Evans, Madison, has been elected vice president, succeeding Dr Brown

Fine Collected—The fine of $6 000 imposed three months ago on Dr John G Barnsdale Madison, when he was sentenced to three years imprisonment in the federal penitentiary Fort Leavenworth, Kan, for an extensive illicit drug traffic, is said to have been collected, June 21, by United States Marshal Frank O Connor, after action had been taken to foreclose on the property of the physician

CANADA

Personal—Dr Edward C Arthur Vancouver, has been appointed medical officer of health of British Columbia——Dr George R Cruickshank Windsor, has been appointed director of laboratories in the department of public health Toronto succeeding Dr Albert G Fleming, who has accepted a position in Ottawa

Care of Exservice Men—Statistics recently compiled show that 8 676 exservice men have been treated in sanatoriums maintained by the department of soldiers' civil reestablishment Of these, 6 636 have been discharged as cured or in quiescent condition There were at the time of the report 2 040 patients undergoing treatment, of whom 158 had had previous treatment, a percentage of 7 7

Venereal Clinics in New Brunswick—The bureau of health of St John plans ten venereal clinics throughout that province These clinics will be in charge of physicians who have special training in the diagnosis and treatment of such diseases The clinics are to be established at St John, Monckton Chatham Bathurst, Campbellton Edmunston, Grand Falls, Woodstock Fredericton and St Stephen

University News—The Provincial Red Cross of British Columbia has offered the University of British Columbia a Red Cross Chair of Public Health The Red Cross will undertake to pay the salary of the professor of public health for three years The activities of the department will be province-wide in scope and the course will extend over five years——In the survey prepared by the Faculty of Medicine of the University of Toronto for the Rockefeller Foundation Ontario leads with one physician to every 905 population British Columbia comes next with one to 905 Nova Scotia is third with one doctor to every 908 and Manitoba fourth with one to every 1 098

Red Cross Peace Program in Nova Scotia—July 12 two great public health caravans planning a tour of Nova Scotia left the parade in front of the city hall Halifax under most auspicious circumstances Each of these caravan consisting of Red Cross ambulances motor trucks and touring cars is equipped with moving picture and lantern slide apparatus and has a personnel of six physicians one dentist and a corps of nurses They will spend six weeks in reaching the coast towns and fishing villages most in need of public health assistance and medical relief work One caravan is going north through Antigonish and on to Sydney, Cape Breton while the other goes south through the Evangeline country to Yarmouth returning along the east coast

GENERAL

Missouri Valley Meeting—The thirty-third annual meeting of the Medical Society of Missouri Valley will be held in Omaha September 6 and 7 under the presidency of Dr Charles Ryan Des Moines Iowa The organization will be the guest of the Omaha-Douglas County Medical Society

New Officers for Chattahoochee Society—The twentieth annual session of the Chattahoochee Valley Medical and Surgical Association was held at Warm Springs Ga July 13 and 14 and the following officers were elected president, Dr William C Gewin Birmingham Ala vice president, Dr Thomas Neal Kitchens Warm Springs Ga and secretary-treasurer, Dr William J Love Opelika, Ala (reelected)

Civil Service Examinations—The United States Civil Service Commission has announced examinations for the following positions at the times stated

Aug 24 1920 associate in clinical psychiatry and psychotherapy to fill vacancies at St Elizabeth's Hospital Washington D C and similar vacancies at $2 500 a year and maintenance Bachelor degree and medical degree prerequisites

Aug 31 1920 pharmacologist in the Public Health Service Washington D C and other vacancies at $3 000 a year qualifications M D degree and three years postgraduate work in experimental pharmacology and physiology required

Mine Rescue Contest—The International First Aid and Mine Rescue Contest will be held September 9 to 11 at Denver under the auspices of the Bureau of Mines The contest will be open to all bona fide first aid and mine rescue teams connected with mining and metallurgical companies of the United States Canada and Mexico Prizes of gold medals, cups and banners will be awarded to teams most efficient in the art of saving human lives This meeting will cover the entire mining industry in North America

Anesthesia Society Activities—The National Anesthesia Research Society announces that its research workers will present the results of their experiments and observations at their annual meeting to be held at Pittsburgh October 4 to 8 at which prizes of $200 have been offered for the best papers submitted——The Toledo Society of Anesthetists has been organized with a 100 per cent enrolment of the recognized anesthetists of the city——It is said that fourteen county societies in California have adopted resolutions within the last four months favoring the limitation of the administration of anesthesia to regular licensed physicians and surgeons

Bequests and Donations—The following bequests and donations have recently been announced

Hospital of the Protestant Episcopal Church Philadelphia and Pennsylvania Hospital each $200 000 trustees of the University of Pennsylvania Philadelphia Orthopedic Hospital Woman's Hospital and Children's Hospital each $100 000 and Philadelphia Polyclinic Hospital $50 000 by the will of Mrs Harriet Blanchard

Methodist Episcopal Hospital Brooklyn General Hospital each $25 000 Bridgeport (Conn) Hospital $10 000 by the will of William W Armstrong New York City

Bowdoin Medical School Brunswick and Portland Me $1 000 by the will of Dr Frank Byron Brown Boston of the class of 1897

New York Post Graduate Medical School and Hospital donations of $25 000 from Ida C Pott Livingston N Y $20 000 for the endowment fund from Mrs F F Cloe New York City $10 000 to endow a bed in memory of Eben Briggs Thomas and $1 000 from Mrs Clarence M Hyde

Harvard University for the purpose of fostering the knowledge of healthful nutrition the residue of an estate valued at $120 573 after the payment of an annuity of $3 600 to his widow by Dr Horace Fletcher

Presbyterian Hospital and Old Men's Home Philadelphia the residue of an estate of $114 000 after creating several small trust funds by the will of Theodore D Rohrman

St Agnes Hospital Philadelphia $1 000 by the will of William Hall

For the new hospital for Marshall Lodge (Masonic) Home and Retreat Lynchburg Va a donation of $20 000 by Mrs Max Guggenheimer Lynchburg

Appeal for Chemicals for Purifying Water Supply—The failure to obtain necessary purifying chemicals is seriously affecting the water supply of a large number of cities

throughout the United States, and urgent appeals to remedy the situation are being made to the U S Public Health authorities at Washington State health officials in New York, Michigan, Ohio, Pennsylvania, Rhode Island, Minnesota, Virginia and Connecticut have sent emergency appeals to the Public Health Service in an effort to have railroad shipment priorities established for the movement of alum and chlorin, which chemicals are used in ridding water of dangerous disease germs The chief source of supply of alum from which bauxite is produced is Little Rock, Ark, and the monthly requirements of this chemical for the United States are about 500 cars Due to congested railroad traffic an acute shortage of these chemicals has existed for several months The facts have been placed before the Interstate Commerce Commission in order that special orders may be issued to railroads for setting aside cars for transportation of these chemicals "Officers of the U S Public Health Service view the situation with alarm as do health officers throughout the country," said Surg-Gen Hugh S Cumming 'The summer is always a critical time in dealing with waterborne diseases, for the demands made on municipal water systems are then so great that usually every available source of water has to be utilized In very few places in the United States have large cities a water supply which does not need to be artificially purified before it is safe for drinking purposes, the usual method being mechanical filtration with alum and disinfection with chlorin With these chemicals practically unobtainable, due to the railroad situation, it may soon become impossible to furnish pure water in some of the largest American cities During the last ten years the purification of drinking water with alum and chlorin has been the greatest single factor in the control of typhoid fever among the civilian population Unless the railroads find it possible immediately to transport the necessary materials to the cities, the most serious consequences in the form of epidemics of typhoid fever are to be apprehended"

LATIN AMERICA

Pasteur Institute in Northern Brazil—The *Amazonas Medico* brings word of the foundation and inauguration of the Instituto Pasteur at Manaos Dr Astrolabio Passos has been in charge of the organization of the institution and continues as director, having been given regimental leave for the purpose He is at the same time director general of the university and member of the state legislature

Personal—Dr J F Arteaga was awarded the Suarez Bruno prize by the Academia de Ciencias at Havana for his work with the title Sanitary Malariology"——Prof Bosch Arana of Buenos Aires, as exchange professor at Montevideo recently described his extensive work in adapting amputation stumps to activate prostheses, illustrating his remarks with moving picture records of what he has accomplished

Argentina Restricts Sale of Acetylsalicylic Acid—The Argentina health department has decided to restrict the sale of acetylsalicylic acid (aspirin) except when prescribed by a physician For six months druggists will be permitted to continue the unrestricted sale of acetylsalicylic acid or medicine containing it already on the local market, but no new compound may be introduced, and after the expiration of six months the sale of the old brands will be prohibited except on the requisition of an authorized medical practitioner

FOREIGN

Czechoslovaks Establish Journal—A new scientific review entitled *Czech Annals for Dermatology and Venereology* has been established in Czechoslovakia and is the organ of the Society for Combating Venereal Disease

Development of Japanese Red Cross—Dr A Minagawa, a member of the board of governors of the League of Red Cross Societies reports that the membership of the Japanese Red Cross, which in 1898 was estimated at over 500,000, was at the end of June, 1919, 1,879,860 The society issues a monthly journal, the *Haqiai*

Retirement of Gimeno—Having reached the age limit, Dr Amalio Gimeno y Cabañas, professor of pathology at the University of Madrid, senator, at one time minister in the cabinet, and author of several popular textbooks, was given an ovation in the university amphitheater at a special gathering for the purpose He was presented with a medallion and a banquet followed

St George's Hospital Pupils' Register—The dean of St George's Hospital Medical School London announces that the Pupils' Register of the hospital and school is ready for the press The book consists of a transcription of all the names, 6 500 in number, on the pupils' register from 1872 to 1915, with annotation notes on all of the men about whom it has been able to obtain data The foreword has been written by Dr George C Peachey, London, on "Medical Education in the Metropolis in the Eighteenth Century" The dean will be glad to have the names of intending subscribers The book will cost not less than $5 25 and may cost $7 50

Personal—The University of St Andrews, Scotland, has conferred the degree of LL D on Dr Leon Frederic, for nearly thirty years professor of pathology in the University of Liege, Belgium, Mr W J Matheson, president of the biologic laboratory of the Brooklyn Institute, and scientific adviser in chemistry to the Board of Health of the City of New York, and Dr Norman Walker, inspector of anatomy for Scotland and direct representative of the profession in Scotland on the General Medical Council——Sir Clifford Allbutt University of Cambridge, M Roux, former director of the Pasteur Institute, Professor Heger, Brussels and Professor Marchiafava, Rome, have been elected honorary members of the Association of European Physicians——Dr John G Adami vice chancellor of the University of Liverpool and professor of pathology and bacteriology in McGill University, Montreal has been elected to an honorary fellowship in Christ's College Cambridge——Cambridge University has conferred the honorary degree of LL D on Dr Simon Flexner director of the laboratories of the Rockefeller Institute for Medical Research

Deaths in Other Countries

Dr **Arnaldo Vieira de Carvalho**, professor of surgery in the Faculdade de Medicina of São Paulo, Brazil, and one of the leaders in the profession in that country——Dr J Bucquoy, dean of the hospital physicians of Paris, at one time president of the Academie de Medecine, author of several works on heart diseases and duodenal ulcer, aged 91 He had attended the meetings of the academy to the day before his death, which was due to a street accident——Dr A Ritti, a Paris alienist and writer on insanity, aged 76——Dr A Levertin, of Stockholm an authority on balneology and mechanotherapy, aged 77

CORRECTION

Bequest for Parkin Prize—In the announcement of the Parkin prize made in THE JOURNAL of June 19 page 1725 it was stated erroneously that the bequest was made to the Royal College of Surgeons, Edinburgh This should have read to the Royal College of Physicians, Edinburgh

Government Services

Public Health Service Campaigns for Infant Welfare

The U S Public Health Service is carrying on a special campaign throughout the country in infant welfare work A series of thirty-three articles on the care feeding, and general requirements of infants has been prepared by the Public Health Service and is being printed by over 100 leading newspapers throughout the United States Mothers are urged to read the articles as published and cut them out of the newspapers for future reference

Hospital Patients Publish Newspaper

Patients of the U S Public Health Service Hospital at Fort Bayard New Mexico are publishing a weekly newspaper known as the *Mountain Breeze* The paper was first printed on a multigraph with but 200 readers The paper met with approval of the patients and hospital officials and a few weeks later a staff was organized In a short period of time the paper has increased its circulation to 700 copies and in size to twelve pages, containing much information and news of value to the patients in the hospital and the community in general

The purposes of the paper, aside from its news value are to unite the patients in their own interests and give them interesting work in the preparation of items for the paper and occasionally cause a smile to those who have dark and gloomy hours The paper is in charge of James D Hill as editor No government funds are used in the printing of the *Mountain Breeze* and all articles are written by the patients and the publication is entirely managed by hospital patients

Foreign Letters

MEXICO CITY

(From Our Regular Correspondent)

July 4 1920

Competitive Tests in the Medical School

The directing body of this institution has ordered that hereafter vacant chairs will be filled by competing examinations which will include the submission by the candidate of an unpublished thesis a public oral test, practical demonstrations whenever they may be required, and in every case an academic test consisting of a lesson given by the candidate to a group of students before the examining board The candidates will be classified according to the points they score in each test, the one receiving the highest number will be appointed professor and the next one assistant professor Even then the professors will not keep their positions permanently but only for some years Those who have been employed for four years and have given full satisfaction will retain their places without having to pass the tests The only thing to be done now is to determine the requirements that applicants must fulfil in order to be admitted to the examinations Once before the same principle was followed, but because of some irregularities the directing board of the school requested that the appointments should be made by the government More recently, in addition to this method there was adopted (although on a small scale) the optional (unofficial) teaching by means of which any physician so invited by the students could teach any subjects that he wished, after obtaining the permission of the faculty and without receiving any salary The first examination which will be held during the present year, will decide whether in our country this procedure will give better results than those obtained by the selection, from among the group of optional professors, of those who have shown unusual fitness for teaching or by the system of free appointments

A New Children's Hospital

In a few days there will be inaugurated a children's hospital which will be supported partly by the government and partly by private charity This institution will receive a certain percentage of the profits derived from the national lottery The previous government suppressed the lottery system, but it is going to be reestablished only as a concession to those who cannot do without gambling, as the new government does not permit other forms of gambling, in spite of the huge profits derived from it There have already been received several gifts of necessary articles for the new hospital, which will probably be named after the late Dr Liceaga

Invitation to a Journalists' Congress

Through Dr Ocaranza the editors of Mexican medical journals have received a very cordial message from the *Revista Médica del Uruguay* asking their opinion on the advisability of holding a meeting of the medical editors of Latin America Though announced a long time ago by THE JOURNAL in its news section it has not been possible to hold the meeting thus far One of our journals has answered, suggesting that in order to insure the success of the meeting, an invitation be extended to Canadian and American medical editors to participate as the latter have a wider experience and the difference in language is not an obstacle to the solution of problems common to all of them and also because the creation of leagues on purely racial lines occasionally produces ill feeling and misunderstandings which should be avoided for the sake of mankind The publication of medical journals in French in Canada and Spanish in the United States, THE JOURNAL for instance shows that the medical profession is probably one of the groups that can most easily establish cordial relations throughout the whole continent and also that medical Pan-Americanism is feasible to the advantage of all concerned

Personal

Dr Cutberto Hidalgo senator has been appointed undersecretary of the department of state——Other medical appointees are Gen Enrique C Osornio as director of the military hospital and the attached medical school, and Dr F Hurtado as professor of clinical medical therapeutics replacing Dr Ricardo Manuell, who goes to the university to teach clinical medicine (postgraduate), Dr Terres having resigned his position——Dr Eliseo Ramirez has been appointed professor *libre* of surgical pathology in the school of medicine——Don Roberto Medellin a pharmacist has been made director of the school of chemical industries

BELGIUM

(From Our Regular Correspondent)

June 23, 1920

Infant Mortality in the Belgian Congo

A scientific expedition to the Congo under direction of Dr Dossin for the purpose of making a study of the sanitary conditions as related to infant mortality has just returned after a period of nine months A voluminous report will shortly be issued but in the meantime it may be announced that the expedition will bear excellent fruit The investigations of Dr Dossin show that education of the negro will result in a considerable increase of healthy children by dispelling some of the many superstitions which are entertained by the natives and above all by improving the conditions of hygiene and nutrition

Death of Debaisieux

T Debaisieux the most eminent and renowned surgeon of Belgium, and emeritus professor of surgery of the University of Louvain died recently Before his death Dr Debaisieux had the gratification of seeing his son appointed to the chair which he himself had held for many years As one of the representative men in the Belgian medical world he was the recipient of marked honors during his life having been elected president of the Societe belge de chirurgie and of the Academie royale de medecine He had many friends in foreign countries especially in the United States and was a corresponding member of numerous foreign societies

Reforms in Medical Education

The Commission for Relief in Belgium assigned the income from one hundred millions of francs to Belgian universities for the development and advancement of higher education In order that the funds may be utilized for the greatest good of future generations of students the scientific societies are making a thorough and impartial study of educational projects The income will permit the universities not only to improve the teaching facilities but also to encourage scientific research On motion of Dr Malvoz, the Academie de medecine recently discussed reforms in medical education with a view to attracting more laboratory workers and thus building up an intellectual group which would maintain the scientific prestige of Belgium

Now the professional training of physicians requires practical and technical knowledge in ever increasing proportions The subjects of examination for obtaining the doctorate of medicine are becoming more numerous and one is obliged to study gynecology syphilography otorhinolaryngology urology and other specialties of which a fundamental knowledge is indispensable to a good general practitioner But with only one diploma for all the young men who are des-

tined for science are obliged to assimilate all this knowledge, even though they desire the title of doctor in order to become assistants, instructors, etc Is this not an opportune time to establish two diplomas? The M D degree would be given after successful termination of a course covering a thorough study of the three branches of medicine This course would be obligatory for all and the diploma would suffice for those who wish to devote themselves to science to anatomy, pathology, embryology, physiology or bacteriology In case a holder of the scientific diploma should desire to practice medicine, he would then have to pass an additional professional examination, covering all necessary technical subjects and the specialties

Dr Swaen broadened the discussion to include more practical methods of teaching the technical branches of medicine The calling of a professor is a sort of apostolate which demands great devotion Personal sacrifice of time is demanded for the training of students in small groups as compared with teaching by lectures ex cathedra, but this is, perhaps, the real solution of the problem To accomplish this it will be necessary to increase the number of professors and to permit organization of teaching faculties on personal initiative

LONDON

(From Our Regular Correspondent)

July 10 1920

Annual Meeting of the British Medical Association

THE FUTURE OF MEDICAL PRACTICE

In the Section of Medical Sociology, Sir George Newman opened a discussion on this subject which was most important in view of the development foreshadowed in a previous letter (THE JOURNAL, June 19 p 1726) He said that the constantly increasing duties placed upon the physician by the state had diverted the whole course of applied medicine from its century old pathway The physician was now mistrustful of what he considered unnecessary intervention and feared the imposition of some cast-iron system, some form of so called 'nationalization," a whole time service which might make him dependent and fettered A larger measure of understanding on his part of central and local government and of the history and on the part of the state and its officers of the development and genius of professional character, was necessary to bring about an improved relation between the two Five outstanding problems now faced the medical profession in its relation to the state 1 We must find a *new unit of health government* At present there was confusion and overlapping because the country had been mapped out five times by different hands for different purposes, such as relief of the poor, sanitary administration, education, insurance act, and war pensions 2 Uniformity of administration was wanted The provision of medical treatment in the home, at the clinic and at the hospital should be brought into proper relation 3 We had no connected hospital system, the relation of hospitals to each other to the contributory clinics and to the insurance system wanted settlement 4 Most important of all was an adequate method of education of the student and the physician A different kind of physician was needed in these times—one with improved training in new subjects—preventive medicine and communal responsibility 5 The physician must be the chief educator of the people in the way of health, and in doing this could not escape his responsibility in problems such as education, recreation, housing, conditions of industry sobriety and venereal disease

Discussing the question from the point of view of medical research, Prof Gowland Hopkins pleaded for a closer cooperation between the laboratory worker and the clinician It was remarkable how largely, in general practice at any rate, the use of chemical methods in diagnosis had been confined to mere tests for albumin and sugar in the urine Much earlier information and more discriminating knowledge concerning renal failure could even now be obtained, say by simultaneous analyses of blood and urine, and on the same lines a better realization of the significance of this or that case of glycosuria So also, estimations of alveolar carbon dioxid tension made simultaneously with determination of the hydrogen ion concentration, or the alkali reserve of the blood are giving precision to knowledge in other kinds of cases These were mere illustrations, but it was important to realize that the so-called micromethods of analysis could be made really accurate, and that many constituents of the blood could now be estimated without inconvenience to the patient Much wider applications of such methods will inevitably arise There was no pathologic condition in which metabolism remains normal, and the great majority of such departures from normality were reflected in some alteration, qualitative or quantitative, of the blood and urine There was, indeed, a mass of chemical information already available which had never yet been applied as it might have been, to the needs of diagnosis, but when the number of laboratory workers (which was absurdly small) was increased, and when the stimulus hitherto lacking, of real contact with clinical material was provided, knowledge and technic available for these particular needs would develop indefinitely

SUBACUTE BACTERIAL ENDOCARDITIS

Dr Libman New York, said that 90 per cent of the cases were due to the nonhemolytic streptococcus, the great majority of the remainder being due to the bacillus of influenza Most often the heart valves showed old and long previous lesions He drew attention to the renal lesion—a glomerulonephritis with partial involvement of the individual glomeruli He described the so-called "bacterium-free" stage occurring in something like a quarter of these patients Renal deficiency anemia, and embolism were the three commonest causes of death, marked browning of the face was not very rare The prognosis was bad, but not hopeless

SURGICAL TREATMENT OF GASTRIC ULCER

Sir Berkeley Moynihan said that gastric ulcer was essentially a secondary disorder The first efforts of the surgeon were to be directed toward discovering the primary source, which most probably lay within the abdomen or in the buccal cavity, after septic infections of teeth, maxillary antrum and appendix had been dealt with, they were to go on to the essential surgical treatment of the ulcer Medical treatment had to be much more rigid and spread over a longer time than formerly He advocated rest in bed, and large quantities of fluid with alkaline drugs rather than starving When medical treatment thus extensively tried had failed, surgery must step in Gastro-enterostomy had come to be the favorite operation, it had given him excellent results when the ulcer was small and situated in the lesser curvature, poor results when the ulcer was large and adherent to the pancreas, and bad results when carcinoma had developed in the base of the ulcer He had abandoned gastro-enterostomy because the results were not good enough for modern surgery It was now only the second-best method Excision of the ulcer with gastro-enterostomy was a good method But he now believed that partial gastrectomy gave the best results, provided the ulcer was suitable for operation at all He briefly described the technic and gave statistics to show that the ultimate results amply justified this radical procedure

Dr Charles H Mayo gave the experience of the Mayo clinic In 95 per cent of the cases, roentgenoscopy could distinguish between gastric and duodenal ulcer There was

a lowering of the free acids and an increase of the combined acids Gastric ulcer was potentially malignant Destruction of the ulcer, along with gastro-enterostomy, was the surgical treatment

CANCER OF THE RECTUM

Mr Ernest Miles described the various modes of spread of the disease, and showed how local increase in size was of less importance than the glandular infection, which was generally recognized as developing in three ascending zones, it was this metastasis which constituted the difficulty in operating It was as important to remove glands discoverible near the common iliac vessels as it was in the analogous case of cancer of the breast to clear the axilla and its contents By a series of diagrams thrown on the screen he showed how, as the glandular geography came to be known, the scope of the operation came to be widened, and how he was forced to regard the abdominoperineal operation as the only radical one

Mr Grey Turner pointed out that the treatment of rectal cancer could never be considered satisfactory as long as the disease was so far advanced as to necessitate operations which left an incontinent anus Improvement could come only through much earlier diagnosis and surgical operation following it He regarded the thorough removal of the growth and surrounding tissues, with 2½ inches of uninvolved bowel above and below, as more important than removal of the upward invasion path The best operation was exploratory laparotomy with colostomy followed by sacral excision

The discussion revealed some divergence of view as to the extent of the radical removal of the rectum Some surgeons upheld the operation advocated by Mr Miles, others thought that some less extensive procedure gave ultimately as good results Some urged that an inguinal artificial anus was essential, others held that every effort should be made to preserve the anus with sphincteric control in its proper situation

EARLY SYMPTOMS OF NERVOUS DISEASE

Dr Henry Head said that early symptoms were often unobtrusive and transitory, and may have impressed themselves so little on the mind of the patient that they were remembered only when a precise and detailed account from the patient was insisted on Many of the early signs of nervous disorder manifest themselves only in mental spheres For example, there might be changes in personality and conduct, and memory defects, such as amnesias, disturbances of sleep, and headache Certain forms of headache could be clearly distinguished, and were of great importance in diagnosis Diagnosis was a threefold process (1) determination of the disturbance of function, (2) translation of such disturbance in terms of the locality of the structural lesion, and (3) the nature of the underlying pathologic process All such names as tabes dorsalis' and general paralysis" should be avoided They did not denote diseases in the strict sense of the word, but were merely shorthand titles for groups of signs and symptoms evoked by the action of *Spirochæta pallida* on different structures of the central nervous system"

PUERPERAL SEPSIS

Mr Victor Bonney said that in nearly all cases of severe puerperal sepsis the streptococcus either alone or in conjunction with *Bacillus coli-communis*, was the predominant organism The original source of the organism in the majority of cases was autogenous and not heterogenous, the zone of skin with the anus as a center being the breeding ground of the organisms He advocated the practical sterilization and shutting off of this part during labor How did the organisms get into the uterus? The most obvious means was by the hands and instruments of the attendant, but at the same time Bonds experiments proved the possibility of inanimate particles passing in the reverse direction of the main stream up into the uterus, and into the peritoneal cavity The ovarian plexus of veins draining from the placental site was the commonest and most important route of infection the phlebitis being accompanied by lymphangitis As to treatment at present there was no surety of defeating the causative organisms by surgery or by direct application of antiseptics He thought however, that the resistance of the body could be raised by vaccines and an attempt could be made to prevent organisms and their toxins reaching the general circulation by means of ligating or excising the ovarian plexus of veins and lymphatics which he had done with success on several occasions

In the discussion which followed Dr Eardley Holland dealt chiefly with the question of prevention He strongly advocated rectal examination and stated that during ten years he had never made a vaginal examination in normal labor

Surgeon-General Gorgas

Surgeon General William C Gorgas who died, July 4, at the Queen Alexandra Military Hospital London, was taken ill some weeks before while passing through this country on his way to the West Coast of Africa to investigate yellow fever During a visit to the hospital, June 8 the king called on him and invested him with the insignia of K C M G in recognition of his services to the British Empire and to the world generally A military funeral, in which the honors rendered to him were those of a British major general was given to him An imposing military procession brought the body to St Pauls Cathedral while a salute of thirteen guns was fired at minute intervals Covered with the Stars and Stripes and a single wreath of white flowers the coffin was borne on one of the gun carriages of the Royal Horse Artillery The Band of the Coldstream Guards played solemn music The generals charger led by a dismounted Life Guardsman, followed the gun carriage The pallbearers included the United States military and naval attaches the presidents of the Royal Colleges of Surgeons and Physicians and of the Royal Society of Medicine, Dr Charles Mayo of Rochester Minn , and the director general of the medical department of the navy The king was represented by Lieut-Gen Sir H Goodwin, director-general of the Army Medical Service, and the government by Dr Addison, minister of health Serbia and Panama, countries which entered into the scientific record of the general, were represented The service ended with the Battle Hymn of the Republic The body is to be taken to America for interment

PARIS

(From Our Regular Correspondent)

July 9, 1920

The Book Crisis

The paper shortage and publishing difficulties still arouse a lively interest M Ducrot in an informative article in the *Revue Scientifique* on the subject of scientific publishing in France showed that if there was a crisis in the publication of literary works this was particularly acute in the case of works on pure science In fact, the elements of book-making have increased considerably in cost as compared to prices before the war compositors and pressmen are paid from three to four times as much as in 1914 the price of paper is five times as great and these factors contribute to make the cost of a book from three to four times as much as before the war Now the income of the intellectual classes the only purchasers of theoretic works has barely doubled while the budgets of public institutions libraries, laboratories etc have been greatly reduced A book even one that constitutes a

veritable working tool, is not a prime necessity It should not, therefore, exceed a certain price, above which it will not sell, and at the present moment, the maximum has apparently been reached

This condition, which constitutes a veritable danger to the advance of science, is not peculiar to France A statistical study by M Fernand Roches in the *Correspondant* discloses the progressive decrease of the number of publications in the principal countries since 1914 Exclusive of periodicals and musical works, the figures show that the number of books published in 1918, as compared to 1917, decreased in France from 5,054 to 4,484, in Great Britain from 8,131 to 7,716, in Italy from 8,349 to 5902, in the United States from 10060 to 9,237, and in Germany from 14,910 to 14,743 The production in 1919 is not yet known, but it was probably less than in 1918

It is interesting to note that the decrease in Italy totaled 2447 books, in the United States 823, in France 570, and in England 415, but Germany, defeated and disorganized, showed a decrease of only 167 works

So far as French medical books are concerned, statistics recently published in the *Bibliographie de la France* indicate that the number of such works, which had suffered a great decrease before the war (from 1,230 in 1910 to 721 in 1914), had again greatly declined in 1915, namely, to 202 works A tendency to improvement was noted in 1916, and again in 1917, when 292 books appeared However, in 1918, a new decline set in which it was believed would be accentuated in 1919, but nothing of the sort occurred and in that year 309 new books appeared

The Insane Asylum at Charenton

Lively protests have been registered with the ministre de l'hygiene, de l assistance et de la prevoyance sociales against his announced intention of converting the old asylum at Charenton, devoted for almost three centuries to the care and treatment of the insane into a maternity hospital in order to relieve the congestion of the Paris maternity wards, which are no longer able to accommodate all applicants The protests emanate on the one hand from the families of the patients at Charenton but above all from the medical alienists of Paris At a joint meeting of scientific societies and professional organizations of psychiatrists, a delegation was appointed to present to the minister of hygiene the objections against the projected change and to seek another solution At a conference between the minister and the committee it was agreed to adopt the following temporary expedient the few patients at present under treatment at the asylum will be installed in one wing of the institution, and the vacant beds will be turned over to the new maternity home, which will thus command accommodations for about 1,000 patients

School Hygiene

The first of the school health centers which the Lannelongue Institute of Social Hygiene is planning to establish in Paris and in other large cities was recently opened under the auspices of M Honnorat, ministre de l instruction publique This center, the prime mover of which is the medical inspector of schools, is first of all a sorting center where children with diseases of the eyes, ears, etc, are referred to the appropriate hospital clinics or private hospitals in the neighborhood, next a treatment center for certain diseases (dental disorders, spinal deformities), it is also a laboratory for the examination of mentally defective or abnormal children, but last and above all it is a center for teaching and close collaboration between the medical profession and the teachers, for the greater good of the pupils From these centers, also the physicians and visiting nurses will set out to give medical attention to children in their homes, to make any necessary inspections regarding the sanitary conditions of their environment, and to give appropriate advice on the improvement of their living conditions

Memorial Tablet for Medical Officers

The society of students and alumni of the Ecole d'application du service de sante militaire at Val-de-Grace is seeking subscriptions for memorial tablets to commemorate the names of medical officers of the regular army who died in active service during the World War The marble tablets will be placed in the arcade at Val-de-Grace, following those erected to the memory of the heroes of former wars The subscription list is in charge of Dr Pasquelle, 8 rue Ballu, Paris

Paris Faculty Election

The council of the Faculte de medecine de Paris has elected Prof Henri Roger as dean of the medical faculty for another term of four years

THE PIRQUET SYSTEM OF NUTRITION

(From a Special Correspondent)

VIENNA, July 1, 1920

To the Editor —It is probably not known in the United States that the name von Pirquet famous for the discovery of the reaction following inoculation with tuberculin toxins—tuberculin test—is now better known in Austria because of Pirquet's system of nutrition This system is described in a three volume work entitled "Pirquets System der Ernährung," and also in a smaller booklet by his chief assistant, Prof B Schick, entitled 'Das Pirquetsche System der Ernährung' published in Berlin in 1919 This system is today widely discussed here People are being fed according to this system—not only adults, but also rachitic children and nurslings It is also used in soup kitchens which have been established under the American Relief Association, which prepare food daily for 288 dining rooms in which 165 000 children receive one meal daily

The unit of nutrition has heretofore been the calory Von Pirquet believes that the calory is not a definite value, and he has adopted as a standard for all articles of food the physiologic or metabolic value of human milk This, representing 667 small calories, has been named by Pirquet "nem' (Nahrungs-Einheit-Menge or Nutritionis ElementuM) To this the metric system is applied giving the words dekanem as the nutritional value of 10 gm of milk, hektonem, 100 gm , kilonem 1 000 gm and tonnenem 1,000 kg Pirquet reasoned that milk is best adapted for a standard value of nutrition because it contains all the ingredients—protein, fat, carbohydrate, water and salt It is the only nourishment that the human body receives during the first year of life, and it is well adapted to support the life of the adult

He has divided all articles of food into eight groups Thus, sugar containing in 1 gm six times the value of 1 gm of milk is equal to 6 nems Suppose that a nursing infant needs 600 c c of human milk per day and must be fed artificially The nem value of human and cow s milk is about the same However, the child fares better on cow s milk when it is diluted—one-half milk and one-half water—thus reducing the nutritional value by one half We are therefore obliged to add to the milk enough nourishment to make up the nem value either by adding fat or sugar We add to the milk 100 gm of water which has no nutritional value, but since 1 gm of sugar is equal to 6 nems we add to the 100 c c of water 17 gm of sugar, this solution is equal in nem value to 100 c c of milk Hence, a child taking 300 c c. of milk and 300 c c of a 17 per cent solution of sugar per day receives the same nutritional value as if it were taking 600 c c of milk Suppose we wish to give the child a combination of other articles of food instead of sugar The nem values of such articles are 1 gm of food, 12 nems, 1 gm

value of cereal, 5 nems Our aim should be to prepare a dish which has the same value as milk One hundred and thirty grams of milk have the value of 130 nems, 8 gm of cereal at 5 nems equal 40 nems, and 5 gm of sugar at 6 nems equal 30 nems This mixture is cooked down to 100 gm The nem value of the porridge is 130 plus 70, or 200 nems, or twice as great as that of milk, that is, 1 gm of the porridge equals 2 nems Such a food Pirquet names doppelnahrung, or double nourishment

I do not care to take up the interesting discussion about the value of fat in the dietary and Pirquet's opinion that it can be safely eliminated by substituting an equal nem value of starch It would lead me too far Suffice it to say that from his investigations he concludes that there is not such a thing as minimum requirement of fat for the sustenance of the human body He looks on fat as a luxus," a condiment, that is not of vital necessit

Not so with proteins The minimum requirement is 10 per cent of the daily ration He derives this percentage in the following manner One hundred grams of human milk equal 100 nems or hektonems which contain 1 7 grams of protein, equal to 10 nems or 1 dekanem, in other words, human milk contains 10 per cent of nem values of protein Since milk with its 10 per cent of protein is able to develop the human body during the first year of life, it can do likewise for the adult For instance, 40 gm of lean meat contain 100 nems or hektonems, but its protein value is not that of 100 nems of milk, which equal only 10 nems, but is six times as much, 60 nems or dekanems Another example Forty grams of egg equal 100 nems (in round numbers) The protein nem value is three times that of milk or 30 nems Eighty grams of potato equal 100 nems Potatoes contain only one half the nem value of milk or 5 nems Pirquet is in accord with Chittenden's conclusions (Physiological Economy of Nutrition with Special Reference to the Minimal Protein Requirement of the Healthy Man, New York, 1904) though the amount of protein may be safely reduced He postulates that the daily rations should contain a minimum of 10 per cent up to a maximum of 20 per cent of proteins per day

Here we come to the second pillar of the superstructure on which Pirquet's system of nutrition rests Rubner calculates the amount of nourishment (in calories) according to the surface of the body Pfaundler has recently (Korpermass-studien, Springer Berlin 1916) pointed out the difficulties of the method and devised a method of his own The method in vogue is the formula of Vierordt-Meeh (Anatomische, physiologische und physikalische Daten und Tabellen fur Mediziner, Fischer, Jena, 1906), namely, O equals $mP^{2/3}$, wherein O is the surface of the body m is the stature and P the weight Hosslin and Pfaundler came to the conclusion that it is not at all the surface of the body that is the criterion for amount of nourishment, but it is the surface of the blood vessels I shall not enter into the intricacies of the mathematical calculations Pirquet has worked on these formulas and verified their findings clinically and arrived at the great discovery that the surface of the intestine can be substituted for that of the surface of the body He has further found that the surface of the intestine equals the square of the sitting length of the body (measuring from the crown of the head to the coccyx) The sitting length is named Si Pirquet looks on the intestine as the surface on which the whole of the food is spread out and finds that each square centimeter is fed by one nem It therefore follows that the amount of nems necessary for the nourishment of any individual can be found by squaring the sitting length of the body The square of the sitting length Pirquet named Siqua

For instance, the maximum daily nourishment for a nursing child whose sitting length (Si) is 40 cm is equal to 40 (Siqua) or 1,600 nems An adult whose sitting length is 90 cm should receive daily 90² (Siqua) or 8 100 nems or the nutritive value equal to 8 1 liters of milk

From the foregoing it is evident that the amount of nourishment for all persons is prescribed in accordance with the simple method of taking the sitting length measurement and multiplying it by itself which gives the number of nems per day It is noteworthy that when these daily nem values are compared with the caloric values they are found to be about identical Pirquet has divided the sitting length into seven groups

In conclusion I wish to say that my interpretation of the system might lead one to think that it is a very complicated affair, yet it is a fact that American nurses and social workers who visited the clinics of Pirquet or who worked in the kitchens of the A R A have all considered the method simple and practical and many returned to the United States as ardent propagandists of the Pirquet system of nutrition

C D SPIVAK M D, Vienna, Austria
American Joint Distribution Committee

NOTE—A more complete discussion of the Pirquet system may be found in a review by Faber H K. Von Pirquets Feeding System, *Am J Dis Child* **19** 478 (June) 1920—ED

Marriages

ELLIOTT STERLING ANDREW ROBINSON, New Haven Conn, to DR HORTENSIA AMANDA FARRALL of Oberlin, Ohio, at Bridgeport Conn recently

MARSHALL ABNER MOORE Ingram Branch, W Va to Miss Margaret Owens of Ceredo, W Va, at Huntington, W Va, in June

LESTER DALE HUFFMAN, Lieut, M C U S Navy, Indianapolis to Miss Nell Madden of Aitken, Minn, May 9

JOHN MOREHEAD EMMETT, Huntington, W Va, to Miss Annie Cleveland Cone of Richmond Va, June 16

LEWIS HAMILTON SETH Easton Md to Miss Katherine Martin of Talbot County, Md at Easton July 3

WILLIAM RALPH BENDER to Miss Sue Elizabeth Stambaugh, both of Hagerstown Md, Baltimore July 16

BOOKER EPHRAM RHUDY Abingdon, Va to Miss Margaret E Hatch of Chesterfield County Va, May 3

GEORGE SCHUYLER BANGERT to Miss Elizabeth Hartshorne Parker both of East Orange N J June 22

WILLIAM JACKSON MERRILL Philadelphia, to Miss Helen Wilson of Grand Rapids Mich July 3

DUNCAN WALDO HOLT Duke N C to Miss Helen Elizabeth Knaur of Denison Texas June 2

JOHN FOX KENDRICK Philadelphia to Miss Mary Elizabeth Dixon of Charlotte N C June 30

EARL LEGRAND WARD Santa Fe, N M, to Miss Helen Farrow of Deming N M June 21

OTTO VANDER VELDE Detroit to Miss Margaret Etta Den Herder of Zeeland Mich June 24

FREDERICK W HORN to Miss Alta Frances Edwards, both of Wortham Texas July 27

IRVING HEWARD CAMERON to Mrs John Ross Robertson both of Toronto July 1

EVERETT CLYDE KELLY Peoria Ill to Miss May Gilfillan of Chillicothe Ill June 5

MAYNARD GILMORE BENSLEY to Miss Muriel Nicol both of Summit N J June 19

KURT JAENICKE Clinton, Iowa to Miss Mary Leimbach of Lyons Iowa June 28

PHILIP HAROLD FINKELSTEIN to Miss Sadie Pallenberg both of Brooklyn June 27

ADOLPH MAX KELLERMAN to Miss Nathalie Rosenberg both of Brooklyn June 8

FRED HOWARD CARPENTER to Miss May Viola Morcom both of Denver June 13

WALTER KELLOGG REED Boulder Colo to Miss Kate Chase of Denver, June 16

Deaths

William Winbourn Gray ⊕ Colonel, M C, U S Army (retired), Forest Hills L I, N Y, Bellevue Hospital Medical College, 1875, aged 69, who entered the army June 6, 1878, as assistant surgeon and was made colonel January 15, 1909, served as chief surgeon of the departments of the Dakotas and of the Missouri, and was retired December 6, 1912, by direction of the president, being over 62 years of age, died, July 3

Thomas Jefferson Buchanan, Tom's River N J, Jefferson Medical College 1889, aged 62, a member of the Medical Society of the state of Pennsylvania, a bacteriologist, a pioneer in the study of the effects of the roentgen ray on malignant growths, founder of the Tom's River (N J) Hospital, a member of the faculty of his alma mater, died, July 15, from malignant disease, the result of prolonged exposure to roentgen ray

Eugene C Powell, McKenney, Va, University of the City of New York, 1861, aged 80, an honorary member of the Medical Society of Virginia, hospital steward and acting assistant surgeon C S Army, during the Civil War, county superintendent of schools of Dinwiddie County for twenty-seven years, and for fourteen years president of the Bank of Dinwiddie, died, May 18

Almer O Huntley, North Bloomfield, Ohio Starling Medical College, Columbus, Ohio, 1886, aged 77, a veteran of the Civil War, during a portion of which he served as physician on a hospital train, and was a prisoner at Andersonville Ga, for twelve years secretary and treasurer of the North Bloomfield Banking Company, and for many years township clerk, died, June 22

Claude Raymond Woods, Delhi N Y, University of Bishop's College Montreal, 1891, aged 52, a member of the Medical Society of the State of New York coroner of Delaware County, formerly a medical missionary in India while driving in his automobile over a grade crossing at Unadilla, N Y, July 6 was struck by a train and instantly killed

W H Minton, Jr, Houston, Texas (license Texas State Board of Medical Examiners, 1907, and in Tarrant County, Texas, 1895), a member of the State Medical Association of Texas, assistant state health officer of Texas since February, 1909, and prior to that time connected with the state pure food department, died, July 6

James H Rogers, Beaudry, Ark (license State Medical Board of Arkansas 1903), aged 55, while attempting to search an automobile in which James Carmody was riding was shot and killed by Carmody July 9, who surrendered himself to the police stating that Rogers claimed to be a United States marshal

Ernest A Robin ⊕ New Orleans, La, Tulane University New Orleans 1891, aged 51, professor of diseases of the eye in the New Orleans Polyclinic, first assistant surgeon in the eye department of the Eye, Ear Nose and Throat Hospital, New Orleans, died, July 9, from heart disease

B Fortunatus Magruder, Fort Worth, Texas Washington University School of Medicine Baltimore, 1871, formerly local surgeon of the Gulf, Colorado and Santa Fe Railroad at San Angelo, Texas, once president of the San Angelo District Medical Society, died, June 5

John W Stewart, Rock Island Ill, University of Pennsylvania, Philadelphia 1867, aged 75, since 1869 a hardware merchant and real estate dealer of Rock Island, president of the Rock Island Humane Society, died in Estes Park, Colo, July 16, from pneumonia

William G Gamble, Guntown Miss, Medical College of Louisiana New Orleans, 1860, aged 86, surgeon in the Confederate Service during the Civil War, died at the home of his son in Greenville, Miss, July 11, from senile debility

William Cooper Eidenmuller, San Francisco, University of the City of New York, 1884, aged 63, formerly assistant city physician of San Francisco consulting physician to the French and Mt Zion hospitals, died, about July 10

Charles Lewis McCurdy ⊕ Bangor Maine, College of Physicians and Surgeons, Baltimore 1888, aged 66, at one time city physician of Bangor and for two terms a member of the board of aldermen, died, July 8

⊕ Indicates 'Fellow of the American Medical Association

Philip Asher, New Orleans, Tulane University, New Orleans 1897, aged 53, founder and dean of the New Orleans College of Pharmacy died in Touro Infirmary, New Orleans, July 5, from tumor of the bladder

Dallas L Scarborough ⊕ Grand Junction Iowa, College of Physicians and Surgeons, Keokuk Iowa, 1871, aged 76, who fell, fracturing his leg several weeks ago, died in a hospital in Iowa City, July 12

Hiram Beach Morse ⊕ Bay City, Mich, University of Michigan, Ann Arbor, 1890 aged 49, a specialist in diseases of the eye, ear, nose and throat, died, July 13, from cerebral hemorrhage

George Mortimer Snook, Parma, N Y, College of Physicians and Surgeons Baltimore, 1883, aged 79, a member of the Medical Society of the State of New York, died, April 16

James Francis Goodell ⊕ Rhinebeck, N Y, New York Homeopathic Medical College and Hospital, New York, 1879, aged 71, for several years health officer of Rhinebeck, died, May 20

Charles Wesley Brandenburg, New York, Eclectic Medical College of the City of New York 1891, aged 69, professor of physiology and hygiene in his alma mater, died, July 17

Smith J Posten, Morgantown, W Va, College of Physicians and Surgeons Baltimore 1881, aged 61, a member of the West Virginia State Medical Association, died, May 11

Eugene E McNicholl, Cobourg Ont, Queens University, Cobourg Ont, 1872 for several years medical superintendent of the Cobourg Hospital for the Insane, died recently

Alfred T Levick, Mt Vernon Ill, College of Physicians and Surgeons, Keokuk Iowa 1876, Missouri Medical College, St Louis, 1883, aged 74, died July 3

Lester Taylor Allen Mallette, Naylor Mo, University of Louisville Ky, 1910, aged 34, died at Cape Girardeau, Mo, July 9 from arsenic poisoning

Mathilde Annette Pelham, New York, New York Medical College and Hospital for Women, New York, 1900, aged 56, died July 16 from diabetes

Oscar S Parlow, Alvarado, Texas, Vanderbilt University, Nashville Tenn, 1883 aged 59, died recently in a sanatorium in Fort Worth, Texas

Robert Edward Lee Jessee ⊕ Philo Ill, Northwestern University Medical School, Chicago, 1896, aged 49, died, July 3 from heart disease

Thomas F Thompson, Snohomish Wash, State University of Iowa, College of Homeopathic Medicine, Iowa City, 1890, aged 71, died, June 20

Sam W Luten, Hickman Ky, Kentucky School of Medicine Louisville 1864 University of Louisville, Ky, 1868, aged 79, died June 25

George Arthur Boone, Troutville Va, University of Virginia, Charlottesville, 1873, aged 70, died in a hospital in Roanoke, Va, July 9

Ernest Kent Parker, Springfield, Mass (license years of practice Massachusetts), died in his office July 8, from cerebral hemorrhage

Martin Dutton Cook, West Stockholm, N J, University of Vermont, Burlington, 1875, aged 75, died, July 9, from heart disease

Albert G Girard, Clyde Kan, Western University, London Ont 1907, aged 49, died, April 18 from carcinoma of the glottis

Henry James Brown, Baltimore, Michigan College of Medicine Detroit, 1885, aged 89, a colored practitioner, died, July 19

Rudolph Joseph Schmeidel, San Francisco, California Eclectic Medical College, San Francisco, 1899, aged 48, died, July 9

George Edwin Townsend, Long Beach, Calif, College of Physicians and Surgeons, Keokuk Iowa, 1887 aged 62, died, July 6

William Sumner Long ⊕ Haddonfield, N J, University of Pennsylvania Philadelphia, 1878, aged 65, died, July 14

James Clemmons McAlister, Hamilton, Ont, Trinity Medical College, Toronto 1886, aged 59, died, April 30

Anton Komoracki, Alpena Mich (license, Michigan, 1900), aged 88, died, April 23 from typhoid fever

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

A LEGION POST ON NOSTRUM GHOULS

During the war THE JOURNAL exposed the methods of certain nostrum concerns that circularized the soldier body with 'scare literature" of their venereal cures Quackery as versatile as it is venal is now adding to its post-war gains by exploiting the families of the dead soldiery Taking advantage of the susceptibility of many a "gold star mother' whose mental and physical resistance has been weakened by grief the 'patent medicine maker has found it easy to 'work" her for a testimonial for this or that 'tonic This new phase of exploitation is dealt with in a resolution recently adopted by the Advertising Men s Post No 38 American Legion of Chicago Their attention had been called to the publication of advertisements of patent medicines' in newspapers and other periodicals purporting to be the testimony of grief-stricken survivors of men who gave their lives in the war We quote in part

BE IT RESOLVED that we go on record as condemning the use of war records of soldiers sailors and marines killed in this war for the exploitation of patent medicines that our Post send a copy of this resolution to the gold star mothers and other relations of departed heroes who through approbativeness cupidity ignorance or otherwise are allowing the publication of their photographs and testimonials together with the exploitation of the heroism of their heroic dead for the promotion of patent medicine sales and that our Post send a copy of this resolution to the Department of Illinois of the American Legion to the *American Legion Weekly* the Associated Advertising Clubs of the World the American Newspaper Publishers Association and divers other new papers magazines periodicals and associations interested.

BENZYL BENZOATE

Its Chemical Properties have been known for years

Its therapeutic properties as an antispasmodic have been known only a short time They are based on the investigations of D I Macht which showed the benzyl ($C_6H_5CH_2$) group to possess properties peculiar to papaverine

Before this new addition to Materia Medica can be given thorough clinical trials it is necessary that the products be of a quality sufficiently pure for medicinal use

FOR THE PHYSICIAN'S PROTECTION as well as an aid to the manufacturers

THE A M A CHEMICAL LABORATORY at the request of the Council on Pharmacy and Chemistry has elaborated purity standards It has also examined the market supply and found that on the whole the nonproprietary medicinal brands are of a satisfactory grade for clinical use

This is a greatly reduced reproduction of one of the numerous educational posters shown at the New Orleans session in the exhibit of the Chemical Laboratory of the American Medical Association

A SHOTGUN MIXTURE

A physician, whose name and address are omitted for reasons sufficiently obvious writes THE JOURNAL

My partner uses this with marked success on any and all intestinal cases of a medical type and I would be glad if you would give me your idea of why it is successful

Zinc sulphocarbolate	5
Bismuth subnitrate	15
Bismuth betanaphtholate	8
Camphorated tincture of opium	15
Syrup of acacia	30
Elixir lactopeptine sufficient to make	130

Mix and give one dram every two hour

In this prescription the chief active ingredients are bismuth subnitrate and camphorated tincture of opium The zinc sulphocarbolate is superfluous and its absence would not be missed so far as its effect is concerned Bismuth betanaphtholate probably differs in no wise in its action from bismuth subnitrate and might therefore likewise be omitted The Elixir Lactopeptine' is a vehicle the digestive activity of which is negligible and of no importance in this combination It therefore might as well be omitted and a vehicle like cinnamon water or simple elixir substituted Syrup of acacia of course serves for the purpose of suspension of the heavy powder It would be better however to prescribe the bismuth subnitrate in powder form and alone One has then the sedative action of the bismuth and the narcotic actions of the paregoric and alcohol in the Elixir Lactopeptine The statement of our correspondent that his mixture is used with marked success on any and all intestinal cases of a medical type is doubtless an exaggeration If it is not the physician who gives this mixture has been fortunate in having cases in which there was no danger of locking up irritating material in the intestines through the administration of an opiate The mixture itself is complex and unscientific to prescribe it indiscriminately in all intestinal cases of a medical type" would be sheer empiricism

Correspondence

REMOVAL OF SMALLPOX PITTING

To the Editor —In Queries and Minor Notes (THE JOURNAL June 19 1920 p 1752) is a letter asking whether there is a remedy for old lesions of the skin caused by smallpox You state that there is no way of removing the scars (pitting) of smallpox

With this broad statement I take issue In some cases the disfigurement can be eradicated It depends on the amount and depth of pitting the close approximation or the widespread distribution of the pits the color and texture of the skin and the area to be treated —whether the nose the cheeks the forehead, etc Nearly all cases can be improved and with the exercise of patience and care some cases can be cured I have successfully treated smallpox pitting the scarring of acne indurata and the pitted skin of hypertrophic rosacea with the following method

A solution of equal parts of trichloracetic acid and water (approximately a 50 per cent solution of the acid) is employed A small pledget of cotton is attached to a fine-pointed piece of orange wood stick The hollow pit of the crateriform scar is coated with a thin layer of liquid petrolatum or oil The edge of the crater is lightly touched with the acid solution forming a ring about its periphery the application being continued until the skin surrounding the pit for a distance of about one-sixteenth inch has turned white Beyond this whitened zone a much weaker application of the acid is made using a solution of say 10 per cent strength so that the intensity of the action of the acid solution gradually lessens as it recedes from the periphery of the pit Or the 50 per cent solution may be employed beyond the whitened zone the action of the acid being controlled by applications of alcohol or water (neutralization) The appearance of such a lesion following this treatment may be aptly compared to the rays of the sun intense light rays

at the periphery, gradually shading off centrifugally The application of the acid has to be made so that there is no sharp line of demarcation surrounding the pit—the acid must be made to "shade off" into the surrounding skin When the smallpox pits are closely set together, the entire area may be treated, piece by piece, with the method outlined In the treatment of the disfiguring pitting of hypertrophic rosacea and nonlobulated rhynophyma, this procedure has been invariably successful in my hands From six months to a year's time is required to produce good results in the average case The application of the acid results in the formation of thin, brown, adherent scabs which are allowed to drop off spontaneously—which usually occurs in from ten days to a fortnight A week or two should elapse before the second application is made over the same area, after the scabs have dropped off

In cases of smallpox pitting, paradoxical as it may seem, the more numerous and closely set the scars are, the better the final result This is because large areas of the affected skin may be "planed off" with impunity, in isolated shallow pits, the results are not so easily attained, as the contrast from bad to good is so much less evident, after the completion of the treatment All cases must be carefully selected, and one or two pitted spots may be experimented on, without making matters worse

I claim no originality for this treatment

FRED WISE, M D, New York

PROHIBITION AND THE MEDICAL PROFESSION

To the Editor —I am not at all in sympathy with your "Prohibition" article under date of July 17 1920 The best surgeons in Milwaukee daily prescribe alcohol either in the form of a nutrient enema egg-nog or stimulant Interviews have been printed in our daily papers in which high-standing physicians are quoted scathingly condemning the government for curbing the privilege of prescribing whisky No layman and no government has the right to tell the physician what to prescribe and what not to prescribe You may just as well limit the busy industrial surgeon in the number of bandages or yards of gauze he is allowed to use, as to limit him in the number of ounces of whisky he may prescribe To shear all physicians over the same comb in their limitation of prescription blanks is equally asinine and autocratic Some physicians see one case a day, others treat a hundred patients a day, while some physicians use quinin morphin, etc, others have greater faith in alcohol It is not for you or me to say what is the best remedy, nor when whisky is indicated, because we do not know During the late influenza epidemic the mortality in our hospitals was frightfully high, while the mortality in localities where modern scientific medicine was unknown was much lower Until we, as scientists, explain this to the people, they will believe in whisky as a good home remedy

As for the sacredness of the eighteenth amendment, permit me to tell you that many of our best physicians believe that this amendment was a fraud on the people It is an axiom in law that where fraud appears it carries its own nullification with it The common people were not consulted when this amendment was passed, in fact, the fanatics saw to it that our best people were in France and Russia at the time

I cannot agree with you that it is within the discretion of the government to dictate to me what to prescribe and when to prescribe it I am still old-fashioned enough to believe with Dr Porter in the sanctity of the physician's prescription, and that every self-respecting physician should resent all lay interference, be such interference fanatical, political, federal or police power In fact I attribute much of the restlessness and lawlessness of the times to the fanatic obsession of the administration, which imagines that its own tastes and prejudices are advance messages, specially sent out by an all-wise Providence to guide the wheels of the universe

I do not use much alcohol in my practice, but I have every regard for the courageous physician who substitutes whisky for opium, and then still more whisky for the many idiotic drugs THE JOURNAL favors Whisky may do some harm here and there, but the moral good it advances in combating the sinister will of the fanatic in his program of oppression and repression will more than offset this possible physical evil Let every clean self-respecting, modern and progressive physician give whisky the benefit of every doubt, and thus register his protest against all autocracy, usurpation and fanaticism Unless we do this, tobacco, coffee, canned fruit and even oxygen will be prohibited by future amendments or statutory laws RALPH EMERGREEN M D, Milwaukee

To the Editor —Relative to the editorial comments (THE JOURNAL July 24, 1920, pp 249, 250) on "The Newer Quackery," and 'The Easiest Way' I would beg leave to ask, is the latter any worse or even "less ethical" to further a hobby fad or whatever you may call it, than the former? Is not the latter a subterfuged ad of the prohibitionist?

LOUIS T KLINKER M D, New York.

[COMMENT —The question is not whether alcohol and spirituous liquors are needed in medical practice, not whether prohibition is right or wrong The question is whether the medical profession shall respect the law or betray its trust by becoming the accomplice of those who are willing to violate the law in order to satisfy their craving for alcoholic beverages The law gives the physician the right to prescribe alcohol or any of its preparations whenever in his judgment it is necessary in the treatment of the sick Every physician in his own conscience, knows how few the occasions are when a prescription for alcohol actually is necessary —ED]

"ELEVATION OF CONJUNCTIVA NEAR LIMBUS PREVIOUS TO CATARACT EXTRACTION"

To the Editor —In THE JOURNAL, July 17, 1920, p 177, Dr Whitmire suggests injecting water under the conjunctiva to facilitate a conjunctival flap May I improve his suggestion by advising the use of cocain instead of sterile water It answers a twofold purpose It produces the bleb, and it adds to the anesthetic effect

JOSEPH E STERNBERG, M D, Boston

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

RACIAL DIETS

To the Editor —Have you any available data on racial diets? I have in preparation a book for public health nurses and believe that it is most essential that they should know something of the food habits of the people with whom they have to come in contact from a professional standpoint I am under the impression that an article on the diet of the Chinese appeared in THE JOURNAL March 30 1918

F J P Boston

ANSWER —We may refer to the following articles on racial diets

Whyte Diet Lists Used in the Hospital of the Union Medical College Tsinan Shantung *China Medical Journal* January 1916
Hess A F and Unger L J Diet of the Negro Mother in New York City THE JOURNAL March 30 1918 p 900
Kohler S Dietary in Large Hospitals in Sweden *Svenska Läk Sallsk Handl* March 1919
Bjørum M V and Herberg P Dietary of Average Family in Denmark in 1916 *Ugesk f Læger* Feb 13 1919
Ruiz J G Diet in the Tropics *Semana méd* Dec 28 1916
Little J M Jr Eskimo Deficiency Disease *Boston M & S J* May 3 1917

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA Juneau Sept 7 Sec Dr Harry C De Vighne Juneau
HAWAII Honolulu Sept 6 10 Sec Dr R W Benz 1141 Alakea St Honolulu
ILLINOIS Chicago Sept 20 23 Director Francis W Shepard on State House Springfield
IOWA Des Moines Sept 15 17 Sec Dr Guilford H Sumner Capitol Bldg Des Moines
NEW HAMPSHIRE Concord Sept 9 10 Sec Dr Charles Duncan Concord

THE TEACHING OF VITAL STATISTICS TO MEDICAL STUDENTS IN BRAZIL

S T DARLING, M D, AND WILSON G SMILLIE M D,
SAO PAULO BRAZIL
Professor and Assistant Professor of Hygiene Respectively Faculdade de Medicina e Cirurgia

We have been so much encouraged by the happy result of our attempt in Brazil to interest our students in the subject of vital statistics, particularly in regard to the assignment and certification of causes of death that we wish to report briefly our methods

It was the duty of one of us (S T D) for several years, at Ancon Hospital, to make the causes of death turned in by the physicians there fit the classification of the "International List of Causes of Death" It was customary there to pay more than usual, even extraordinary, attention to the difficult subject of assigning correctly the cause of death in the cases that came to necropsy The combined services of the pathologist, bacteriologist, and at times the chemist were used to effect this As early as 1908 before the publication by Dr Cabot of his comparison of clinical diagnoses and postmortem findings, Col John L Phillips, superintendent of Ancon Hospital had ordered that the laboratory should be required to investigate all cases of fever not definitely pneumonia or tuberculosis and not reducible by quinin within three days, and he later ordered that when the anatomic diagnosis differed markedly from the clinical diagnosis, they should be reported in parallel columns to him for reference to the physician in charge of the case These wise hospital regulations led to beneficent results, as can well be imagined—results of value to the patients, the physicians, the pathologist, and the sanitary officer In the task of making the causes of death conform to the international classification it was realized how thoughtlessly the work of assigning a cause of death is usually done by the generality of busy practitioners, and even by the best of qualified men when their attention is not specially directed to the requirements of the health officer and the statistician A comparison of the diagnostic results obtained at Ancon Hospital and the procedure and care exercised there to arrive at an accurate cause of death, with those seen in other parts of the tropics confirmed us in the desire to emphasize to our students the importance of correctly diagnosing and assigning a cause of death in such a way that the sanitary officer and the statistician may be put in possession of the information so requisite to them Probably no subject is treated so carelessly by physicians as that of assigning a cause of death We are convinced that one reason for this is that there has been no special class-work devoted to the subject in the medical schools We determined to remedy this defect, so far as the Faculdade de Medicina e Cirurgia at São Paulo was concerned

Lectures were given in which the subject was fully explained The publications of the United States Department of the Census that is, the 'International List of the Causes of Death' in its expanded form, the 'Joint Causes of Death," and the little "Physicians Handbook were shown the class and their contents explained to them

Field excursions to the department of demography were made Through the courtesy of Dr Arthur Neiva director of public health for the state of São Paulo and Dr Meyer, chief of the department of demography an afternoon was spent in showing the students every detail in the subject of collecting and compiling the data returned to the demographer The errors of the physician, both of commission and omission were shown and fully explained The students were enabled to see the results which would accrue from their thoughtlessness or carelessness Their attention was directed to the necessity of referring certain causes as, for example, embolism under accidents of childbirth' when the disease had occurred with childbirth, or of referring a death to homicide when in fact it had resulted in that way The students were counseled to avoid indefinite or ill-defined terms such as 'stroke' 'atrophy" or "convulsions" Typical and common faults were shown by the demographer and his clerical assistants and the students were told how to avoid them Not only was the exercise well attended but it was followed with marked attention and unflagging interest

Finally practical class exercises were given in the laboratory, in which typical problems were presented to the students for working out—problems in which the students were required to assign a cause of death which would give the health officer and the statistician the information required by them for the proper and intelligent conduct of their work

The interest that was aroused by these practical laboratory exercises was extraordinary and entirely unexpected Part of this interest undoubtedly is due to the fact that the Latin temperament likes a problem presented in such a way that there is a chance for ratiocination and polemics and partly because we stimulated their sense of civic and national pride Be that as it may the results make us feel that the experiment can be tried with success not only in other parts of South America but also by schools in the United States and elsewhere

PRACTICAL EXERCISES

Besides the lecture on vital statistics and the visit to the state department of demography already described the students have two practical exercises of two hours each, corresponding to laboratory periods The work falls naturally into two divisions

1 The proper method of compiling vital statistics
2 The proper methods of interpretation of vital statistics

The proper compiling of vital statistics depends in no small part on the physician for he is the origin of almost all data and their accuracy is absolutely dependent on his intelligence knowledge and painstaking care In order that there may be a uniform terminology, the International List of Causes of Death has been compiled and is now available in English French, Spanish, German, Portuguese, Chinese Japanese and many other languages The adoption of the international list was a great forward step in securing uniformity of vital statistics, but since deaths may be reported for one cause only, with one other disease as a secondary or contributory cause and since individuals die in the majority of instances from a complication of diseases, the selection of the proper cause of death from among three or four or a possible half dozen causes must be made with care

These facts are explained to the students who are then given the six rules of Bertillon by which the physician may determine the primary and contributory causes of death

SIX RULES OF BERTILLON FOR PROPER CLASSIFICATION OF CAUSES OF DEATH

1 If one of the two diseases is an *immediate and frequent* complication of the other the death should be classified under the head of the primary disease.

2 If the preceding rule is not applicable, the following should be used If one of the diseases is *surely* fatal and the other is of less gravity, the former should be selected as the cause of death

3 If neither of the foregoing rules is applicable, then the following If one of the diseases is *epidemic* and the other is not choose the epidemic disease

4 If none of the preceding rules is applicable, the following may be used If one of the diseases is *much more frequently fatal* than the other, then it should be selected as the cause of death

5 If none of the four preceding rules applies, then the following If one of the diseases is of *rapid development* and the other is of slow development, the disease of rapid development should be taken

6 If none of the foregoing five rules applies, then the diagnosis should be selected that best characterizes the case

It is to be noted that in Rule 3 the term epidemic disease is used This is a rather indefinite term, and therefore in order to have a criterion we choose diseases as epidemic if they are on the list of reportable diseases of the state in which a physician lives The list of reportable diseases for his state are then given the student and he is required to memorize both the rules of Bertillon and the list of reportable diseases

Having established a basis on which to work each student is given a blank death certificate and a problem with the request that he fill out the certificate properly in fullest details Some examples of these problems may be given

Problem—You have been treating a boy aged 15 years for the last three weeks who has typhoid fever Three days ago he suddenly developed bronchopneumonia and died Make out a proper death certificate

The tendency of the student is to put bronchopneumonia as the cause of death, and typhoid fever as a contributory cause By careful reading of Bertillon s rules, however he sees that though Rules 1 and 2 do not apply in this case Rule 3 has a very direct application and the disease should be reported primarily as typhoid fever because this disease is reportable and has great hygienic importance

Problem—You have been attending a girl aged 4 years for three months The child had scarlet fever six months ago and developed nephritis which has progressed steadily and the child died

In this instance the acute symptoms of scarlet fever such as fever, rash, etc, had long since passed away, and therefore the tendency of the student is to classify the death as nephritis for the primary cause and scarlet fever for the contributory cause This, of course, is incorrect, since according to Rule 1, in case a disease is a direct and frequent complication, as nephritis following scarlet fever the nephritis should be classed not as the primary but as the contributory disease

Problem—An old syphilitic alcoholic aged 56 was picked up in the street by the ambulance and died before he reached the Santa Casa Necropsy revealed cirrhosis of the liver anasarca and cardiac insufficiency—syphilitic aortitis and endocarditis Make out death certificate

This problem is a difficult one and not an uncommon picture on the necropsy table Furthermore none of the rules of Bertillon apply, except possibly the last one The general conclusion among the students in the discussion of this case is that the death should be classified as follows primary cause, syphilitic aortitis, contributory cause, cirrhosis of liver

In solving the problems the rules published by the Society of Medical Officers of Health of England, and the introductory remarks in the Bureau of the Census Manual of the International List of the Causes of Death are also used

These problems are typical examples of the difficulties which each student must solve in filling out the death certificate When all are finished, each student reads his problem and his solution, while the others criticize his conclusions

This exercise has proved valuable in that it has opened the eyes of the students to the importance of recording an accurate diagnosis on the death certificate the necessity of some standard method of reporting causes of death, and the important part played by the physician in the compilation of mortality statistics

INTERPRETATION OF VITAL STATISTICS

The second practical exercise is devoted to the proper methods of interpreting vital statistics This exercise is of course very simple, and deals only with the method of calculation of the more important rates pointing out the common errors in calculation and interpretation of rates, mistakes in the making of charts etc Each student in the class is given a problem in vital statistics, and required to make a chart All necessary data are furnished, he being required only to calculate the rates and make the chart

Problems are given for example, to illustrate the methods of determining birth rates—e g so many births per thousand calculated population One student makes a chart of his own city for the last twenty years another a chart of his own city in comparison with twenty other large cities throughout the world for a given year A third makes a chart of the death rate of São Paulo and twelve other cities of Brazil with a population of more than 50 000 people, there are only twelve such cities in all Brazil from which statistics are available Similarly death rates are calculated for São

TABLE 1—INFANT MORTALITY IN SÃO PAULO COMPARED WITH THAT OF OTHER CITIES

Cities	Data Furnished to the Student: Deaths from 0 to 1 Year	Births	Rate Calculated by the Student
São Paulo	2 619	17 596	147
Buenos Aires	4 123	43 961	94
Boston	2 05.	19 760	103
Montevideo	1 041	9 383	108
New York	12 818	137 664	9.
London	8 819	99,341	88
Lisbon	1 795	8 802	203
Stockholm	528	6 583	80
Havana	1 156	5 389	212
Bologna	448	3 3.0	134
Milan	1 209	9 788	121
Marseilles	1 0.8	6 623	1.6
Paris	2 853	28 271	100

Paulo for a period of years and for a given year in comparison with cities of the world and cities of Brazil Thus the student learns not only what a normal rate should be, but also how his own city and nation stand in relation to the outside world

The various methods of calculating infantile mortality are explained and the advantage of using the standard method of calculation e g the number of deaths under 1 year exclusive of stillbirths per thousand births is dwelt on The various common causes of a high infantile mortality are mentioned

One student then calculates the infantile mortality rate of São Paulo in comparison with previous years another the rate for Sao Paulo in comparison with foreign cities, and a third the rate for São Paulo in comparison with twelve other Brazilian cities This comparison makes a great impression, since Sao Paulo has a very high infant mortality rate, because it is an industrial city many mothers working in the factories and because it has a very bad milk supply

Other problems include specific disease death rates, calculated by the number of deaths per hundred thousand population Comparisons are made of the capital city with the rates for previous years, and also with other foreign and national cities in respect to specific death rates for typhoid fever malaria, diphtheria, scarlet fever measles, dysentery, smallpox cancer and other diseases A typical problem may be cited (Table 1)

When all calculations are completed, each student presents his problem and his conclusions to the class for criticism

The most interesting feature of this exercise is the effect on the students of the comparison of the vital statistics rates of São Paulo with those of other cities in Brazil and of other nations The students have great civic pride, and they are proud of their native state, so that one can observe the rapid and pronounced fluctuations of the emotional barometer of the whole class as each problem is read A tremendous enthusiasm develops when the chart on comparative birth rates is shown, for São Paulo has one of the highest birth rates of any large city in the world of which reliable statistics are available There is an abrupt fall in enthusiasm when the comparative death rates are calculated, and deep gloom settles down when the high infantile death rate is compared with those of the large cities of other nations There is quiet satisfaction when the specific death rates for dysentery at São Paulo are compared with these of Bahia and other cities in the north of Brazil followed by enthusiasm over the low death rates for scarlet fever, whooping cough and diphtheria as compared with cities of the United States and of Europe

TABLE 2.—BIRTH RATE OF SÃO PAULO COMPARED WITH THAT OF OTHER CITIES 1916-1917

Cities	Data Presented to Student: Population	Data Presented to Student: Births	Rate Calculated by Student
Sao Paulo	470 873	17 598	39 4
Buenos Aires	1 610 594	43 961	29 1
Boston	767 539	19 760	25 0
Montevideo	373 581	9 383	20 8
New York	5 602 841	137 664	24 6
London	4 237 387	80 544	19 8
Lisbon	471 424	8 802	18 07
Stockholm	408 792	6 774	16 05
Havana	363 297	5 389	14 07
Bologna	201 905	3 390	16 04
Milan	705 049	9 788	13 07
Marseilles	583 740	6 623	11 03
Paris	2 847 229	28 298	9 8

These two practical exercises, brief as they are, transform the notion of vital statistics in the mind of the student Instead of its remaining as long columns of incomprehensible figures, it becomes vitalized parts of his own life, a function of the state for which he will be responsible, an accurate index of the civilization the progress and the development of the medical science and public health in his own city and nation He is awakened from a self-satisfied lethargy and sees his nation as others see it He would resent any criticism of his city as a personal insult, but readily accepts the severe criticism of the statistical chart for he realizes that figures are impersonal factors which are applied in standard ways throughout all parts of the world

Washington January Examination

Dr William M O Shea, secretary, Washington Board of Medical Examiners, reports the written examination, held at Spokane, Jan 6 8, 1920 The examination covered 13 subjects and included 130 questions An average of 75 per cent was required to pass Of the 12 candidates examined, 11 passed and 1 failed Forty-nine candidates were licensed by reciprocity The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Georgetown University	(1901)	80 7
Johns Hopkins University	(1912)	89 2
St Louis University School of Medicine	(1919)	87 9
Cornell University	(1917)	88
University of Oregon (1904) 89 1	(1919)	84 7
Thompsonian Medical College	(1905)	*
University of Toronto	(1914)	90 7
Montreal School of Medicine and Surgery	(1903)	80 4
University of New Zealand (1916) 84 1	(1917)	89 6
FAILED		
Northwestern University	(1919)	†81 7

College	Year Grad	Reciprocity with
LICENSED BY RECIPROCITY		
University of California Medical School	(1916)	California
Yale College	(1916)	Michigan
Chicago College of Medicine and Surgery (1917) Illinois	(1917)	Wyoming
College of Phys and Surgs Chicago (1902) Iowa (1903) Minnesota (1905) North Dakota	(1909 2)	Illinois
Northwestern University (1903) Montana (1904) North Dakota (1905) Minnesota (1907) Illinois (1908) Montana (1910) (1915) (1916)	(1917 2)	Illinois
Rush Medical College (1900) North Dakota	(1904 2)	Illinois
University of Illinois	(1916)	Illinois
State University of Iowa College of Medicine	(1916)	Illinois
University of Louisville (1893) Kentucky	(1915)	Kentucky
Johns Hopkins University	(1912)	Ohio
Univ of Mich Med School (1886) Montana	(1916)	Michigan
Detroit College of Medicine	(1899)	Nebraska
University of Minnesota Coll of Med and Surg (1896) Minnesota (1905) (1906)	‡(1915)	Minnesota
Kansas City Medical College	(1899)	Missouri
St Louis Coll of Phys and Surgs (1883) Kansas	(1918)	Missouri
University Medical College of Kansas City	(1912)	Montana
University of Nebraska	(1902)	Minnesota
Ohio State University College of Medicine	(1914)	Ohio
Jefferson Medical College of Philadelphia	(1916)	Penna
Medico Chirurgical College of Philadelphia	(1893)	Illinois
University of Pennsylvania (1910)	(1913)	Penna
Western Pennsylvania Medical College	(1899)	Penna
University of Nashville (1898) Georgia	(1901)	Idaho
Vanderbilt University	(1917)	Tennessee
National University of Athens	(1913)	Illinois

* No grade given

† *Fell below 60 per cent in one branch*

‡ Reports state that this candidate has admitted that he presented fraudulent credentials

Book Notices

ORTHOPEDIC SURGERY FOR THE STUDENT AND PRACTITIONER By Dr Georges Laurens Authorized English translation of the Second Revised French Edition by H Clayton Fox F R C S With a Foreword Contributed by J Dundas Grant M A M D F R C S Cloth Price $4 50 Pp 339 with 592 illustrations New York William Wood and Company 1919

If the American reader will discount those sections dealing in technic—wherein the methods in vogue in this country are obviously superior to those of the continent—he will be gratified to have found a real textbook for beginners and general practitioners It must be remembered that the book is written only for the student and the practitioner, and stops at the point of operative interference when the specialist must be called in A fund of valuable and practical information is contained in its pages of a character rarely found within the covers of a single publication Moreover, the author does not skim through the subjects discussed in the usual textbook manner He has put personality into the work, with the result that one feels one is reading an earnest lecture rather than a stereotyped textbook Of particular value is the minuteness of detail with which Laurens instructs in the art of examination and the same love of detail persists in his care of the patient Under each necessary head come two valuable paragraphs 'What to do' and 'What to avoid' which are of especial usefulness to the beginner and the physician in general practice The book is a marvel of completeness in its field and should be welcomed by those practitioners who through choice or necessity, take care of 'special cases' in practice

A GENERAL INTRODUCTION TO PSYCHO-ANALYSIS By *Prof Sigmund* Freud LL D Authorized translation with a Preface by G Stanley Hall President Clark University Cloth Price $4 0 Pp 406 New York Boni & Liveright 1920

This book presents a translation of twenty eight lectures delivered to laymen by the author He tries to make a difficult subject elementary and succeeds in spots, but unless the laymen to whom the lectures were delivered had considerable fundamental knowledge of psychology and of the nervous system it is doubtful whether the lectures accomplished all that the author wished them to accomplish They are divided into three groups the first four lectures concerning the psychology of errors, the second ten lectures on dreams and the last fourteen lectures on the general theory of the neuroses For those who have sufficient fundamental knowledge and who wish to begin at the bottom in their study of the Freudian movement and psychanalysis this is an excellent one since it bears the authority of the originator of this school of

thought For those who have not the requisite fundamental knowledge, there are several books which are probably simpler and have the additional advantage of being brief

DIE RFIZTHTORIF UND DIE MODERNFN BEHANDLUNGSMFTHODEN DFS DIABFTES Von Priv Doz Dr R Kolisch Paper Price, 30 marks Pp 152 Vienna Urban & Schwarzenberg 1918

Kolisch for so long a time has been an enthusiastic advocate of undernourishment in the therapy of diabetes that this little book, setting forth in concentrated form his theories and method of treatment is particularly appropriate He is a great believer in the theory that the cause of diabetes resides in an overproduction of sugar, "in an increased cleavage of sugar out of the tissues from highly complex molecules" This breaking off of sugar from the highly complex molecules is caused by irritation Despite the tremendous experimental work of the last thirty years an etiologic therapy of diabetes is still lacking, and modern treatment rests on diet The kernel of Kolisch's whole discussion is obtained from the following paragraph, which we believe should be quoted in full

This normal and continuous splitting off of sugar from the protoplasm from the tissues apparently is increased in diabetes probably the result of toxins or nerve irritations and this increased splitting off of sugar from the tissues explains the hyperglycemia and the glycosuria in the sense of being an overproduction of sugar inasmuch as this splitting off is much in excess of actual needs (Dieser normale und kontinuierliche Vorgang der Abspaltung von Zucker aus dem Protoplasma aus den Geweben ist beim im Diabetes gesteigert wahrscheinlich durch toxische Influsse oder nervose Reize und diese vermehrte Abspaltung von Zucker aus den Geweben erklärt die Hyperglykämie und Glykosurie im Sinne einer Ueberproduktion von Zucker, da die Abspaltung den jeweiligen Bedarf bedeutend übertrifft)

American readers are now so well acquainted with undernourishment in the treatment of the disease that not much need be said concerning this section of Kolisch's discussion which throughout seems to be characterized by an appreciation of the necessity of maintaining the individual patient at an existence level He differentiates this from starvation, and in his closing paragraph criticizes Allen's earlier publications on absolute starvation

Some figures quoted from the mortality statistics of Vienna are used by Kolisch as evidence of the value of undernourishment in the prevention of death from diabetes These statistics are given in the accompanying table This monograph is indeed, an interesting and valuable contribution

DEATHS FROM DIABETES IN VIENNA AND TOTAL MORTALITY

	Total Mortality		Cause of Death Diabetes	
Year	Civilian	Military	Civilian	Military
1913	32 130	184	337	2
1914	31 480	1 788	292	2
1915	33 052	3 966	265	6
1916	33 494	4 137	265	15
1917	40 260	5 871	194	15

STANDARD METHODS FOR THE EXAMINATION OF WATER AND SEWAGE Fourth edition Cloth Price $1 25 Pp 115 Revised by Committees of the American Public Health Association American Chemical Society and Referees of the Association of Official Agricultural Chemists Boston American Public Health Association 1920

This edition contains few important changes No changes whatever have been made in the chemical procedures In the preparation of culture mediums, American peptones have been made standard and the concentration of carbohydrates in broths has been reduced from 1 to 0 5 per cent The most important addition to the methods is the introduction of phenol red for adjusting the reaction of mediums This should rapidly replace titration with phenolphthalein

ARTERIOSCLEROSIS AND HYPERTENSION WITH CHAPTERS ON BLOOD PRESSURE By Louis Marshall Warfield Third edition Price $4 St Louis C V Mosby Company 1920

In this edition Warfield has added new material and revised the old, thus bringing the book well up to date The subject is treated in a somewhat elementary fashion, but the main features are given sufficient attention The views expressed are in general those with which most investigators and clinicians would agree The printing, type paper and illustrations are excellent The book can be commended as a safe guide for the student or practitioner desiring an introduction to this subject

Medicolegal

Failure to Diagnose Pregnancy—Omniscience Not Required

(Jaeger Stratton (Wis) 176 N W R 61)

The Supreme Court of Wisconsin, in affirming a judgment in favor of the defendant, who was sued by Mr and Mrs Jaeger in separate actions for damages for alleged malpractice after which the actions were consolidated and tried as one, says that Mrs Jaeger at the time she was examined by the defendant had borne nine children Her menses had ceased two months before that, and she feared that she might be pregnant She suffered from headache, gas in the stomach, and severe bearing down pains in the lower abdomen She had not had such pains in her former pregnancies, and so became alarmed and consulted a physician, who did not definitely diagnose her condition, but suggested pregnancy, a tumor or inflammation of the appendix, and advised her to come back in a couple of months Instead of doing so she went to the defendant who found a serious inflammatory condition with pain and tenderness in the lower abdomen The uterus was somewhat enlarged, and there appeared to be an inflammatory mass in the broad ligament The defendant diagnosed the latter as the chief cause of the trouble, though he thought it might be appendicitis or, possibly pregnancy He advised an operation She said she did not want to be operated on if she was pregnant He told her he thought she was not She consented to an operation and told him to remove the appendix when he took out the tumor The operation disclosed that she was about two and a one-half months pregnant and that she had an inflamed appendix covered with a Jackson's membrane The appendix was removed and she made a normal recovery, and in time gave birth to a living and healthy child The medical testimony showed without dispute that the failure to diagnose accurately her condition was due neither to lack of care, skill nor judgment, that under the conditions as they appeared an early operation was advisable, that the operation was skilfully performed, that the patient made a normal recovery, and was relieved from a menace that might have resulted very seriously during later pregnancy by having to have the inflamed appendix removed In view of such testimony the trial court properly directed a verdict for the defendant When a physician exercises that degree of care, diligence, judgment and skill which physicians in good standing of the same school of medicine usually exercise in the same or similar localities under like or similar circumstances, having due regard to the advanced state of medical or surgical science at the time, he has discharged his legal duty to his patient Where due care diligence judgment and skill are exercised a mere failure to diagnose correctly does not render a physician liable Not omniscience, but due care, diligence judgment and skill are required of physicians When they meet such test, they are not liable for results or errors in judgment

Violation of Medical Practice Act by Spiritualist—Sufficient Information

(People v Krause (Ill), 125 N E R 726)

The Supreme Court of Illinois, in affirming a judgment of conviction of the defendant of a violation of the medical practice act, says that the record showed that two women inspectors employed by the city of Chicago called at the defendant's place of business and found him treating an old man that the defendant's wife gave Miss Morley a reading telling her, among other things that she was suffering from lung trouble, that Miss Morley told her that she did not think she had that trouble but if the reader had told her that she had stomach trouble she might have believed her, that the defendant's wife then said it made no difference what her trouble was, her husband would give her a treatment which would cure her, that the inspectors then went out into the room where the defendant was and found him treating a woman, that the defendant invited Miss Morley to sit down

on a chair and remove her coat and hat, that the defendant placed her feet and put her hands on her knees, that he then manipulated her shoulders and her back, that he put his hand on her forehead and put his head to her back and listened, that he continued this treatment for fifteen minutes and then inquired if she did not feel better, that he charged her 50 cents for the treatment that she was suffering from no ailment when she was treated by the defendant, that the defendant had in his window a sign calling himself a spiritualist, but that he said nothing to her about spirits The defendant contended that he healed through the influence of the spirits, that he laid his hands on the patient and asked the Deity to make the sick person well and that he gave such a treatment to Miss Morley, and that therefore he came within the exception to the statute and was not required to have a license But the contentions of the defendant could not be sustained Nor would it justify a reversal of the case even if it be conceded that certain instructions to the jury which were refused might properly have been given because the defendant was clearly guilty of the act charged, and no other verdict could be reached under the evidence in the record

Section 2 of the medical practice act provides that no person shall practice any system or method of treating human ailments without the use of drugs or medicines and without operative surgery, without a license so to do Section 20 of the act provides that any person shall be regarded as practicing medicine or treating human ailments who shall treat or profess to treat operate on or prescribe for any physical ailment or any physical injury to or deformity of another, excepting the treatment of the sick or suffering by mental or spiritual means without the use of any drug or material remedy

The information in this case charged that the defendant, not being then licensed to treat human ailments without the use of drugs or medicines and without operative surgery, did at the place and on the date named treat human ailments without the use of drugs or medicines and without operative surgery, that at the place and on the date aforesaid he did treat one Miss Morley by rubbing and by laying on of the hands and otherwise manipulating on the person of said Miss Morley, contrary to the form of the statute The information charged the offense substantially in the language of the statute, and was therefore sufficient The offense was stated plainly enough to be readily understood by the jury, and it informed the defendant of the offense with which he was charged so that he could properly prepare his defense This is all the law requires It was not necessary for the information to negative the exceptions

Hospitals Liable for Negligence of Employees

(Mullmer v Evangelischer Diakonniessen erein (Minn) 175 N W R 699)

The Supreme Court of Minnesota in affirming a judgment for $6 500 damages for the death of a pneumonia patient at the defendant's hospital, says that when the nurse in charge left the room, leaving the window slightly open, and five minutes later the window was found wide open and the patient was found lying dead on the ground below the jury might well find that he was killed by the fall In fact they could not well find otherwise. And when the nurse in charge testified that she felt that the patient needed watching, that he was in a dangerous condition in which he might commit injury to himself, that if she had had more help she would have thought it proper to watch him more closely, and that the only reason she did not watch him more closely was that she had so much work that she could not do so that evidence was sufficient to sustain a finding that the defendant was negligent in failing to provide a sufficient number of attendants and that the attendants were negligent in failing to exercise proper care for the patient s safety If this were a hospital maintained for the profit of the owners, liability for such negligence would be undoubted When a patient enters such a hospital knowing that the number of nurses is less than the number of patients he may not expect constant attendance, but the patient is entitled to such reasonable attention as his safety may require If the patient is temporarily bereft of reason and is known by the hospital authorities to be in danger of self-destruction the authorities are in duty bound to use reasonable care to prevent such an act

A more serious question is whether a hospital corporation constituted as was the defendant is liable to a patient for damages resulting from the negligence proved The defendant corporation was organized for the maintenance of a private hospital The ground on which the hospital building stood was donated The building was erected partly by money donated and partly by money borrowed The corporation had no capital stock and paid no dividends Its funds were used for the maintenance of the hospital It was not a free hospital It had a regular schedule of rates which patients were expected to pay The remaining small percentage were free or partly free The receipts from the pay patients exceeded the cost of maintenance including repairs by more than $5 000 a year This patient was a pay patient The defendant came within the class commonly known as charitable corporations The fact that its patients paid for their accommodations did not make it otherwise The distinguishing facts were that it was partly endowed by donation and that it was not conducted for purposes of gain There are numerous carefully considered decisions holding that such a corporation is not responsible for the negligence of its employees But in this court's opinion the rule of liability seems best and the court adopts it

One reason given for the rule of nonliability to patients is that when a person enters a charitable hospital he enters into a relation which exempts the association from liability for negligence of its servants in ministering to him, or in other words he assumes the risk of injury from such negligence As a matter of fact the patient who enters a hospital has no thought of anything of that kind His thought is that the hospital affords better facilities for caring for him than he has elsewhere at his command, and this court sees no reason why the assumption of such a risk should be imposed on him The same principle would exempt the hospital physician yet such exemption is not generally sustained Men are not exempt from the consequences of negligence though on a mission of mercy

Nor does this court think that the hospital corporation should be exempted from liability for the negligence of its employees so that the funds entrusted to it should not be diverted from the purposes for which they were given or because it derives no gain from the service rendered The corporation must administer its functions through agents as any other corporation does It harms and benefits third parties exactly as they are harmed or benefited by others To the person injured the loss is the same as though the injury had been sustained in a private hospital for gain The court does not believe that a policy of irresponsibility best subserves the beneficent purposes for which the hospital is maintained The court does not approve the public policy which would require the widow and children of the deceased patient, rather than the corporation to suffer the loss incurred through the fault of the corporation s employees or in other words, which would compel the persons damaged to contribute the amount of their loss to the purposes of even the most worthy corporation

Society Proceedings

COMING MEETINGS

Amer Assn of Electro Therapy & Radiology Atlantic City Sept 14 1
Amer Assn of Obstetricians and Gynecologists Atlantic City Sept 20
American Public Health Association San Francisco Sept 13 17
American Roentgen Ray Society Minneapolis Sept 14 1
Colorado Congress of Ophthal & Oto Laryn Denver Aug 4 5
Colorado State Medical Society Glenwood Springs Sept 7 9
Indiana State Medical Association South Bend Sept 2 3
Missouri Valley Medical Society of the Omaha Neb Sept 6-7
Utah State Medical Association Ogden Sept 7 8
Washington State Medical Association Tacoma Sept 16 17
Wisconsin State Medical Society of La Crosse Sept 9 10
Wyoming State Medical Society Cheyenne Aug 9 10

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Physiology, Baltimore

June 1920, 52, No 2*

*Study of Forced Respiration Experimental Production of Tetany S B Grant and A Goldman, St Louis—p 209
*Study of Carbohydrate Tolerance in Eck Fistula and Hypophysectomized Animals (Posterior Lobe Removal) C Jacobson, Baltimore—p 233
*Gastric Response to Pies Puddings and Cakes R J Miller H L Fowler, O Bergeim M F Rehfuss and P B Hawk Philadelphia—p 248
Segmental Activity in Heart of Limulus D J Edwards, New York—p 276
Arterial Pressure Curve as Influenced by Occlusion of Certain Vascular Areas and by Histamin D J Edwards New York—p 284
*Artificial Production of Monsters Demonstrating Localized Defects as Result of Injury from Roentgen Rays W M Baldwin Albany—p 296
Relation of Epinephrin Output of Suprarenals to Changes in Rate of Denervated Heart G N Stewart and J M Rogoff, Cleveland—p 304
Effect of Acids Alkalies and Salts on Catalase Production W E Burge Urbana Ill—p 364
*Permeability of Placenta for Epinephrin in Pregnant Rabbit and Albino Rat Y Shimidzu Philadelphia—p 377
Character of Sympathetic Innervation to Retractor Penis Muscle of Dog C W Edmunds Ann Arbor Mich—p 395
*Energy Expenditure in Household Tasks C F Langworthy and H G Barott Washington D C—p 400

Forced Respiration and Tetany—Forced respiration causes symptoms of tetany to occur in the human subject, these include carpopedal spasm, Chvostek's sign, Trousseau's sign, Erb's sign, and in one instance observed by Grant and Goldman a tetanic convulsion As a result of the fall of alveolar carbon dioxid tension produced by overventilation, there is a reduction in the hydrogen ion concentration of the blood, a reduction of the carbon dioxid capacity of plasma, a change in the reaction of the urine to the alkaline side, a decreased excretion of ammonia, and a slight increase in the calcium content of the serum The authors believe that the underlying factor in the tetany of forced respiration is the alkalosis

Carbohydrate Tolerance—Jacobson found that Eck fistula animals have an extremely low tolerance for laevulose The conversion of laevulose into glycogen is a function which is permanently lost when the portal blood is diverted into the vena cava by Eck fistula Glucose tolerance is only slightly modified in Eck fistula animals The liver is not entirely essential for glucose metabolism The muscles undoubtedly perform well the functions of glycogenesis and glycogenolysis when the liver is shunted out of the portal circulation The glycogenic capacity of muscle is increased following posterior lobe removal in an Eck fistula animal as in an intact animal The augmentation of tolerance is, however, considerably slower No augmentation of levulose tolerance is noted

Gastric Response to Pies, etc—A study was made by Miller and others of the acid responses and evacuation times of nearly fifty pies, cakes and puddings in the normal human stomach The average evacuation time on puddings for all subjects was two hours and eighteen minutes as against two hours and twenty-seven minutes for pies and three hours and two minutes for cakes Averaging the highest total acidities, values were obtained for puddings of 92 for pies of 90 and for cakes of 90 Direct comparisons of the three types of foods indicated also that pies were handled more readily than cakes, and pudding somewhat more readily than either

Artificial Production of Monsters—Baldwin reports the anomalies produced by a maximum effect of roentgen-ray energy on a relatively small amount of the protoplasmic mass of the frog's egg

Permeability of Placenta to Epinephrin—The experiments reported on by Shimidzu show that epinephrin in the fetal blood cannot be increased by a subcutaneous injection of the drug into the mother animal

Energy Expenditure in Household Tasks—Fifty-three experiments made by Langworthy and Barott on energy during the performance of various household tasks were made, using a specially designed respiration calorimeter and a young woman subject The results for such light tasks as sewing, crocheting, knitting, darning and embroidering, gave an average expenditure of 9 calories per hour more than that of the same subject sitting quietly in a chair, other tasks regarded as "harder work" than sewing, such as washing, sweeping and scrubbing floors, caused an increased energy expenditure over the expenditure when at rest with the same subject, of about 50 calories per hour Several other tasks studied gave results between these two figures thus, ironing dressing a child (life-size model) and dishwashing each requiring about 24 calories per hour During the experiment with dishwashing the height of the table used was varied, and a corresponding variation in energy expenditure was noted, a variation of 15 per cent in height of table causing an increase in energy expenditure of 20 per cent to 40 per cent The observed increase of heat elimination well illustrates the importance of choosing equipment to "fit" the worker

American Journal of Public Health, Chicago

June 1920 10 No 6

Community Medicine and Public Health C Meyer, New York—p 489
Malaria Control from Engineering Point of View W G Stromquist Memphis—p 497
An Inferential Index of Swimming Pool Purity G M Fair Cambridge Mass—p 502
Public Health Aspects of Cartagena Colombia A de Zubiria, Cambridge Mass—p 509
Causes of Typoid in Massachusetts G T O Donnell- Boston—p 517
Self Imposed Inspection of National Canners Association H M Loomis Washington D C—p 521
Value of Plant Records in Development of Plant Hygiene A R Hackett Detroit—p 525
Resume of Methods for Control of Malaria H R Carter, Baltimore—p 528
Number of Bacteria on Lips of Milk Bottles and Their Significance R S Dearstyne Charlotte N C and C L Ewing Baltimore—p 533
Endemic Goiter as a Public Health Problem M Tolman New York—p 434
Water Treatment at St Louis Mo E E Wall St Louis—p 437
Improvement in Vacuum Method of Filling Capillary Tubes T A Watson New York—p 445

American Review of Tuberculosis, Baltimore

June, 1920 4, No 4

Upper Air Passages as Environment for Bacterial Growth A L. Bloomfield Baltimore—p 247
*Twenty Four Years Experience with Subcutaneous Tuberculin Test L Brown and F H Heise Trudeau N Y—p 254
Relationship of Influenza to Clinical Pulmonary Tuberculosis Deductions from 1918 1919 Epidemic M F Sloan Towson Md—p 262
*Effect of Heat on Experimental Tuberculosis H J Corper and H Gauss Denver—p 269
*Effect of Bleeding on Tuberculosis in Guinea Pig H J Corper Denver—p 276
*Anomalous Position of Colon Revealed during Routine Chest Examination S Swezey and L T Black Denver—p 280
Early Vertebral Tuberculosis with Clinical Picture Suggesting Renal Calculus J W Churchman New York—p 288
Work for the Tuberculous What is Suitable for the Discharged Tuberculous Man D A Stewart Ninette Manitoba—p 292
Influence of Climate as Distinguished from Fresh Air in Treatment of Pulmonary Tuberculosis and Its Complications J W Flinn Prescott Ariz—p 300

Results from Use of Subcutaneous Tuberculin Test—The conclusions drawn by Brown and Heise are based on a study of 324 patients subjected to the subcutaneous tuberculin test made with Koch's old tuberculin (O T) during a period of twenty-four years The use of the test produced no lasting untoward result and, given as advised, has only a very temporary effect on the patient, which, however is more usually favorable In only two instances did tubercle bacilli occur in the sputum for the first time immediately after the test Over 90 per cent of the seventy-five patients with a history of hemoptysis reacted to the tuberculin test About 90 per cent of 144 patients with dry pleurisy, and 90 per cent of ten patients with wet pleurisy, reacted positively to the tuberculin test Of forty-one patients studied by the roentgen ray, only three showed a positive increase of shadows Of 268 patients, only forty-eight showed an increase of rales during the reaction, and twenty-one a decrease The authors are convinced that the subcutaneous tuberculin test when positive proves tuberculous infection, but when accompanied by

definite clinical changes or more surely if manifesting an increase of roentgen-ray changes (focal reaction), indicates that the lesion is more accessible to circulatory changes and presumably less firmly cicatrized (healed)

Effect of Heat on Experimental Tuberculosis—Guinea-pigs were exposed to heat by Corper and Gauss for fifteen minutes at 50 C to increase the lymphocytes in the circulating blood Five days later these animals were inoculated with small doses of virulent human tubercle bacilli All the animals were sectioned forty days after inoculation Comparing the "heated" and "nonheated" animals, there was no distinctive difference in the anatomic distribution of the tuberculosis and in the animals that died there was no difference in the duration of life

Effect of Bleeding on Experimental Tuberculosis—Corper found that bleeding guinea-pigs in amounts of from 1 to 1 05 c c on alternate days, initiated a week before and continued practically throughout the entire period of infection (forty-one days), has no appreciable effect on the tuberculosis produced by small doses of virulent human tubercle bacilli (0 00001 and 0 0000001 mg) given subcutaneously to guinea-pigs as measured by the anatomic tuberculous involvement

Anomalous Position of Colon—In the case cited by Swezey and Black a loop of the colon was lying between the diaphragm and the liver It was discovered on roentgen-ray examination

Annals of Medicine, Hagerstown, Md.

April 1920 1 No 1

Field of Internal Medicine R W Wilcox New York—p 5
Relation of Bacteriology to Pathology of Tonsils and Relation of Either or Both to Symptomatology L A Turley Oklahoma City—p 41
Gastro Intestinal Form of Influenza J A Lichty Pittsburgh—p 49
The Patient s Reaction F M Pottenger Monrovia Calif—p 52
*Wasserman Reaction with Glycerolated Human Serum about Two Years Old E H Ruediger Bismark N D—p 54
*Early Signs of Fibrillation of Ventricle as Shown by Occurrence in Electrocardiogram of Periods of Ventricular Tachycardia L F Bishop New York—p 58
*Pseudochylous Ascites in Case of Syphilitic Nephritis E L Tuohy Duluth Minn—p 61
Endothelial Leukocytosis in Guinea Pigs by Injection of Nonpathogenic Bacilli of Acid Fast Group I A McJunkin Milwaukee—p 64
*Osteomalacia Effects of Certain Extracts and Oophorectomy on Metabolism of Calcium and Magnesium H A Freund and B C Lockwood Detroit—p 67
*Late Cardiorespiratory Manifestations of Gassing as exhibited by Returned Soldiers F Smithies Chicago—p 77

Wassermann Test with Glycerolated Human Serum—Fifteen glycerolated human serums were kept by Reudiger in hermetically sealed glass ampoules in a dark place at room temperature for about two years, after which time they were as suitable for the Wassermann reaction as they were when fresh The results obtained with the syphilitic serums 2 years old were not quite identical with the results given by the same serums while fresh In some instances, the fresh serums gave stronger positive results than did the old serums, in other instances the old serums gave stronger positive results than did these same serums two years previously The nonsyphilitic serums gave uniformly negative results In two years' time these serums had become but slightly anticomplementary and reheating them to 56 C for thirty minutes removed the anticomplementary property without noticably affecting the result given by the Wassermann reaction All serums remained perfectly clear and sterile

Fibrillation of Ventricle—The two cases cited by Bishop direct attention to this rare and possibly early indication of a condition which might lead to sudden death Thus far, both of the patients are alive The ventricular tachycardia which these patients have shown is a serious influence toward causing sudden heart failure The rapid rate may tire out the heart if it continues for a long time or the tachycardia may lead to fibrillation of the ventricles with sudden death The cause is found to be a disease process of the ventricular muscle perhaps due to rheumatism, or some other degenerative influence

Pseudochylous Ascites in Syphilitic Nephritis—Striking features in Tuohy's case were the extraordinary number of tube casts found in the urine and the high content of albumin The unusually high blood count (5 110 000 red cell 9 400 leukocytes) The absence of cardiac hypertrophy or increase in blood pressure the finding of low sugar and creatinin and a fair phenolsulphonephthalein output usually suggestive of a fair prognosis picture otherwise of a wet nephritis finding of pseudochylous transudate association of syphilis The presence of ascitic fluid seemed to be merely a terminal condition

Calcium and Magnesium Metabolism in Osteomalacia—In the case cited by Freund during thyroid administration there was a marked increase in the loss of both calcium and magnesium After pituitary extract there was a still greater loss of calcium while the magnesium was scarcely affected During parathyroid administration there was a retention of both calcium and magnesium After removal of the ovaries there was a much greater loss of calcium and a slightly greater loss of magnesium than at any preceding observation

Cardiorespiratory Sequels of Gassing—Reviewing a large amount of material Smithies found that eighty-five patients were affected with some form of cardiorespiratory disorder in whom trauma from gassing could be proved and in whom the symptoms or signs of heart and lung malfunction were seemingly attributable to that gassing It is with the analysis of these eighty-five patients that this report is especially concerned

Annals of Surgery, New York

June 1920 71 No 6

*Relative Values of Radium and Surgery in Treatment of Tumors of Pelvic Organs J G Clark Philadelphia—p 683
Amputation of Leg O Borchgrevink Christiania—p 697
*Accidents and Precautions in Ligation of Common Carotid Artery J Homans Boston—p 707
*Complete Division of Spinal Cord by Gunshot Wound W B Cadwalader Philadelphia—p 719
*Fibroscale Gallbladder J R Corkery Spokane Wash—p 2/3
Relation of Variations in Renal Vessels to Pyelotomy and Nephrectomy D N Eisendrath Chicago—p 726
*Modified Technic for Radical Cure of Inguinal Hernia in Male DeW Stetten New York—p 744
Utilization of External Oblique Aponeurosis in Inguinal Hernia with Muscle Deficiency W S Schley New York—p 753
Multiple Fibroids in Male Pelvis L J Owen Ft Sheridan Ill—p 755
Intestinal Obstruction due to Ascaris Lumbricoids F C Watson Bocas del Toro—p 757
Portable Suspension Frame (Erroneously Called Balkan Frame) Employed in Treatment of Wounded during European War H M M Lyle New York—p 760
Chlorin Antiseptics W E Lee Philadelphia.

Use of Radium in Pelvic Tumors—The results of radiotherapy in 209 cases of cancer of the female genito urinary organs are given by Clark He believes it possible that with a further development of technic cancer of the cervix may be removed from the surgical domain In cancer of the fundus the results from surgery are too satisfactory to be abandoned in favor of radium although in the last four cases he has witnessed a very favorable outcome in patients in whom there were grave contraindications to surgical measures In two instances a cure appears to have been effected For patients therefore suffering with complications prohibiting an operation radium offers a decided hope

Technic for Amputation of Leg—Borchgrevink says the scar has to be so situated as to escape pressure from the prothesis Avoid ligating the large vessels which means interference with the nutrition of the flaps Separate the tendon of the biceps muscle and other soft parts from the fibula as close to the bone as possible without injury to it periosteum and without injury to the insertion of the same tendon into the external tuberosity of the tibia Every part of the stump ought to be covered by the fascia The tibia ought to be divided at the lowest possible point but no lower than 22 cm above the end of the stump

Anomaly of Circle of Willis—In the case cited by Homans the double anterior communicating vessel of the circle of Willis proved to consist of a single small artery and a parallel fibrous band The circle of Willis was in other respects within normal limits that is the posterior communicating arteries were of about average size The really important difference between this and the normal brains lay in the comparatively small size of the anterior carotids vertebrals posterior cerebrals and basil-

Division of Spinal Cord by Gunshot Wound—Cadwalader proves that complete division of the cord at the tenth thoracic segment by gunshot wound is not in itself necessarily fatal, for if automatic emptying of the bladder can be established, it is possible for the patient to live a comfortable chair life indefinitely Furthermore, it goes to prove that, even under the most favorable conditions for surgical procedure, return of function does not occur, for in this case the separated ends of the severed spinal cord were approximated by sutures within three hours after the injury, and after careful nursing for nineteen years no clinical sign of a return of function has appeared It can therefore be assumed that regeneration of the spinal cord does not take place after complete section and end-to-end suture

Fishscale Gallbladder—A fishscale-like condition of the gallbladder is described by Corkery as 'multiple small cysts of the mucosa" Grossly, the mucosa appears to be studded more or less profusely with cystlike bodies of 1 mm more or less in diameter These are nearly the color of normal mucosa A fresh specimen examined by Corkery strikingly resembled the scales of a fish On section, it became apparent that in this case no cysts were present There have been found and diagnosed thirteen cases of multiple cysts of the mucosa, in the last three years among a total of approximately 3 000 gallbladders removed in the Mayo Clinic at that time These, together with fourteen cases received directly from the surgeon, furnished the material for this study

New Herniotomy Technic—The modification described by Stetten is said to differ from all other procedures in that it utilizes, to the fullest extent, all the useful, available structures for the actual repair of the hernial orifice, without mutilation or distortion, and insures a maximum guarantee against recurrence Essentially, it consists in the overlapping of the external oblique aponeurosis beneath the transplanted cord and over the Bassini suture

Boston Medical and Surgical Journal

July 15 1920 **183**, No 3

Specific Aortitis W D Reid Boston—p 67
Renal Calculus with Negative Roentgen Ray Findings A Hyman New York—p 74
Agglutinating Titer of Blood Serum in Typhoid Fever D O Hare Waltham Mass—p 77
Prostatectomy H C Bugbee New York—p 80

Agglutinating Titer of Typhoid Blood Serum—In the cases studied by O Hara, a fall in the agglutinating titer of the serum before clinical recovery was becoming evident was a sign of poor prognosis

Bulletin Johns Hopkins Hospital, Baltimore

June 1920 **31**, No 352

*Adenoma of Carotid Gland M R Reid Baltimore—p 177
*Hemodynamic Reactions of Cerebrospinal Fluid and Hypophyseal Extracts C Jacobson Boston—p 185
Experimental Observations on Ureters Peristalsis and Antiperistalsis G B Wislocki and V J O Conor Boston—p 197
*Fate of Bacteria Introduced into Upper Air Passages V Friedlander Bacilli A L Bloomfield Baltimore—p 203
Physiologic Study of Eustachian Tube and Its Related Muscles A R Rich Baltimore—p 206
*Hereditary Spastic Paraplegia V R Mason and W F Rienhoff Jr, Baltimore—p 215

Adenoma of Carotid—Three cases are reported by Reid He says that the slow growing pigmented tumor of the carotid gland, heretofore described as 'carotid body tumor' is a simple hyperplasia of a part or all of the normal gland, it should be designated as an adenoma or hyperplasia of the carotid body In rare instances a malignant condition may develop in it In some cases in which an operation is imperative on account of the size of the growth it may be wiser to do a decompressive operation than to attempt extirpation of the tumor Then after the tumor dislocates laterally and becomes more superficial, its removal will be easier and safer, particularly if the artery has been tied at the time of decompression

Reactions of Cerebrospinal Fluid—Cerebrospinal fluid from human and bovine sources in concentration gives physiologic reactions identical with those obtained from the injection of various tissue extracts, effects which Jacobson thinks most probably are due to the presence of histamin There is no definite evidence of the presence of a pressor substance in the cerebrospinal fluid suggestive of any posterior lobe secretion It seems rather improbable that the pituitary gland gives its secretion into the ventricles or into the cerebrospinal fluid All pituitary gland extracts show marked variability as far as their responses are concerned on intravenous injection They all show a depressor effect common to the tissue extract In general it may be said (*a*) Anterior lobe exhibits depressor effect mainly (*b*) Posterior lobe exhibit a moderate depressor effect followed by a specific pressor effect (*c*) Pars intermedia has a small depressor, followed by a pressor effect (*d*) Whole gland shows a neutralization of the depressor and pressor effects (*e*) The posterior lobe secretion, if it is a specific secretion, is most probably produced in the pars intermedia and finds its way into the pars nervosa The posterior lobe extract on intravenous injections appears to have an antidiuretic rather than a diuretic effect Glycosuria is produced by intravenous injection of posterior lobe extract in a number of cases This glycogenic effect is more marked in the rabbit

Fate of Bacteria in Upper Air Passages—Friedländer bacilli freshly isolated from various sources were introduced by Bloomfield into the normal upper air passages without producing local or general disease The organisms disappeared rapidly, usually within twenty-four hours It was not possible artificially to produce a carrier state The bacteria are removed by mechanical means This group of organisms when associated with disease usually act as secondary invaders

Hereditary Spastic Paralysis.—The four cases of hereditary spastic paraplegia reported by Mason and Rienhoff are of interest chiefly as examples of a rare hereditary alteration of the central nervous system which has affected members of one family for three generations The cases differ in minor details from others that have been reported, but in general may be considered as fairly typical instances of the disease

Canadian Medical Association Journal, Toronto

June 1920 **10** No 6

*Sciatica from an Orthopedic Standpoint J A Nutter—p 497
Traumatism of Spleen Report of Cases E L Connor—p 504
Syphilis and Gonorrhea from Public Health Point of View R R McClenahan—p 512
Plea for Sphincter Ani F N G Starr—p 516
Some Roentgenograms and Their Significance G S Gordon—p 518
*Infectious Diarrhea E A Morgan—p 527
Need of Psychopathic Hospitals in Canada G S Mundie—p 537
Medical Board Work on Psychiatric Cases H Dover—p 543
Occurrence of Acidosis After Anesthesia E M Ross—p 548
Prolongation of Life A H Wright—p 554

Therapy of Sciatica—The treatment of sciatica, Nutter says, depends on the cause Tonsils, if diseased, may need removal, abscessed teeth may need extraction, a chronic prostatitis may need treatment An arthritic spine needs fixation, a relaxed sacro-iliac joint should have efficient support, disease of the hip-joint calls for immobilization For the affected limb absolute rest is essential, pillow fixation, as a rule, being found useful The length of the period of rest will depend to a considerable extent on how successful has been the treatment of the cause of the disease For the pain, acetylsalicylic acid is useful, as also the salicylates and drugs of the coal tar class, such as acetphenetidin Morphin should be avoided wherever possible Counter irritation over the course of the nerve is valuable The Paquelin cautery is very useful but should be used only very superficially The application of mustard and the use of blisters may give relief The injection of sterile water, alcohol, or weak cocain solution into or beside the nerve, is not often practiced, as permanent damage may be done Nerve stretching is no longer in favor, and properly so In subacute cases, baking and massage will generally be found useful Hydrotherapy is sometimes of value but like electricity more often gives only temporary relief Anemia should be treated with iron and arsenic A special diet is indicated only in cases of gout, diabetes and rheumatoid arthritis of intestinal origin The injection of sterile water into the epidural space of the sacral canal has given relief which has lasted several hours or even longer

It is a procedure easy of accomplishment and unlikely to result in damage to the nerve

Infectious Diarrhea—The indications for treatment of this condition as summarized by Morgan are (1) neutralization of specific toxins by injection of a specific antitoxin if this is available, (2) correction of dehydration by saline or glucose injections, (3) prevention of formation of toxic products of protein putrefaction by administration of a food rich in carbohydrate, (4) specific therapy

Illinois Medical Journal, Oak Park, Ill

June 1920 **37** No 6

Mental Sanitation G F Butler Wilmette—p 378
Roentgen Ray Treatment of Exophthalmic Goiter M J Hubeny Chicago—p 383
Diabetes Mellitus J Hall Westfield—p 387
Diabetes Insipidus A A Goldsmith and D C Sutton Chicago—p 389
Chemotherapy in Tuberculosis M W Harrison Collinsville—p 392
Urogenital Tuberculosis M J Latimer Chicago—p 394
Convulsions in Infancy and Childhood G H Withers Chicago—p 397
Gonorrheal Arthritis F A Bisdom Chicago—p 400
Difficulties and Failures in Sluder Tonsil Operation W D Black St Louis—p 402
Adenocarcinoma of Ovary in Five Year Old Girl O W Knewitz East St Louis—p 407
Pneumoperitoneum and Roentgen Ray Examinations B H Orndoff Chicago—p 408

Journal of Biological Chemistry, Baltimore

June 1920 **42**, No 2

*Hemato Respiratory Functions II Henderson Morriss Method for Determining Carbon Dioxid in Plasma and in Whole Blood H W Haggard New Haven Conn—p 237
*Exchange of Chlorid Ions and of Carbon Dioxid Between Blood Corpuscles and Blood Plasma L S Fridericia Copenhagen—p 245
*Quantitative Method for Determination of Vitamin R J Williams Chicago—p 259
Modification of Van Slyke Method for Determining Arginine A E Koehler Madison—p 267
Alleged Relation of Catalase to Animal Oxidations R L Stehle and A C McCarty Philadelphia—p 269
Fermentation of Glucose Galactose and Mannose by Lactobacillus Pentoaceticus N Sp W H Peterson and E B Fred Madison—p 273
*Metabolism of Sulphur III Relation between Cystin Content of Proteins and Their Efficiency in Maintenance of Nitrogenous Equilibrium in Dogs H B Lewis Urbana Ill—p 289
*Determination of Methemoglobin and Hemoglobin in Blood W S McElroy Pittsburgh—p 297
*Vitamin Studies V Antiscorbutic Properties of Raw Beef R A Dutcher E M Pierson and A Biester St Paul—p 301
Critical Study of Methods for Detection of Methyl Alcohol A O Gettler New York—p 311
*Manganese Quantitation in Biologic Material Manganese Content of Human Blood and Tissues C K Reiman and A S Minot Boston—p 329
Blood Sugar Concentration and Blood Sugar Methods H F Host and R Hatlehol, Christiania—p 347

Determination of Carbon Dioxid in Blood—In the Henderson-Morris method of determining the carbon dioxid of plasma or whole blood Haggard found that the various corrections almost exactly neutralize each other At ordinary temperatures and barometric pressures the reading on the gas buret for the carbon dioxid absorbed during the gas analysis (corrected only for the carbonate of the ammonia solution) may be taken as indicating directly within the error of the method the amount of carbon dioxid contained *in the blood or plasma* Each 0.01 c c corresponds to 1 volume per cent of carbon dioxid This method is particularly valuable for the determination of the carbon dioxid content and combining power of whole blood With it the analysis of whole blood is as easy as that of plasma

Chlorid Distribution in Blood—The influence of various carbon dioxid tensions on the distribution of chlorids between blood plasma and red blood corpuscles was experimentally investigated by Fridericia and the results are represented in curves showing conformity with the curve representing the carbon dioxid combining power of the blood at various carbon dioxid tensions Fridericia has been able to confirm with a different method the results of Van Slyke and Cullen's experiments on the influence of the carbon dioxid tension on the partition of the chlorids between plasma and red blood corpuscles Experimental evidence is presented to show that the cause of the exchange of chlorid ions and other anions between plasma and corpuscles is in the red corpuscles and *not in the plasma*

Determination of Vitamin—A method is presented by Williams which is based on a gravimetric determination and measures the growth of a very large number of cells rather than a few which have been isolated and hence the variations in results are not so large The vitamin content of any material can be rated in terms of milligrams of yeast produced under given conditions

Cystin Essential for Maintenance and Growth—The relative efficiencies in nutrition of casein a protein low in cystin content, and of serum albumin high in cystin content have been studied by Lewis in dogs Serum albumin under conditions of a low protein intake is more effective in maintaining nitrogenous equilibrium than is casein When casein is supplemented by cystin however it is as efficient for the maintenance of nitrogenous equilibrium as is serum albumin These experiments furnish additional evidence that cystin is essential for maintenance as well as growth

Hemoglobin and Methemoglobin Determinations—The method described by McElroy is based on the fact that while oxygen as is well known is liberated from hemoglobin by potassium ferricyanid it is not liberated from methemoglobin even in vacuo The total hemoglobin (hemoglobin plus methemoglobin) is determined colorimetrically as methemoglobin, using potassium ferricyanid to convert the hemoglobin into methemoglobin The oxygen capacity is determined by Van Slyke's method from which is calculated the hemoglobin only The hemoglobin as calculated from the oxygen capacity is subtracted from the total hemoglobin determined colorimetrically as methemoglobin The difference is the amount of methemoglobin

Antiscorbutic Properties of Raw Beef—Guinea-pigs were fed diets of oats water and an amount of milk sufficient to improve the diet but insufficient to prevent scurvy These animals developed scurvy and died When water extracts of raw lean beef were fed representing 5 10 15 and 20 gm of raw beef no differences could be noted in the time of onset of scurvy or in the length of life of the experimental animals Orange juice added to the basal diet prevented scurvy both in the presence and absence of meat extract The excellent condition of the animals on the orange juice-beef extract diet shows conclusively that the poor condition of the animals on the beef extract diet was due to the absence of the antiscorbutic vitamin rather than to any deleterious property of the beef extract

Manganese in Blood and Tissues—A method is developed by Reiman and Minot for the analysis of manganese in blood and tissue which is more rapid and has fewer sources of error than methods heretofore employed A series of results for the manganese content of human tissue obtained from fourteen necropsies is presented Manganese was found in all the tissue analyses the liver carrying the highest amount averaging 0.170 mg per hundred gm of wet tissue

Journal of Immunology, Baltimore

May 1920 **5** No 3

*Transfer of So Called Normal Antibodies from Mother to Offspring I Agglutinins G C Reymann Copenhagen—p 247
Relation of Certain Drugs to Anaphylactic Reaction and Bearing on Mechanism of Anaphylactic Shock M I Smith Omaha—p 279
Antigenic Properties of Hemocyanin C L A Schmidt Berkeley Calif—p 259
Nature of Bacterial Toxemia H Zinsser New York—p 265
Studies in Anaphylaxis A F Coca New York—p 297

Transfer of Agglutinins to Offspring—By examining the trasmission of the agglutinins normally occurring in the blood from mother to offspring in goats Reymann was able in only one case in fourteen to prove the recurrence, in all others the kids were born without agglutinin and probably derived it from the mother animal through the milk in which is to be found accumulated parturition From the milk as well as from the kid's serum it disappears in the course of a few days, then follows a period of a few months in which the blood of the kid is free from agglutinin and then it appears again probably in consequence of an immunization from the flora of the digestive tract The research was con-

cerned with coli and typhoid agglutinins, as well as agglutinin against rabbit and horse blood corpuscles

Journal of Industrial Hygiene, Boston

June 1920, 2, No 2

Ether Poisoning in Manufacture of Smokeless Powder A Hamilton and G R Minot Boston —p 41
Cases of Phosphorus Necrosis T M Legge, London —p 50
Economic Aspects of Industrial Medicine C K Drinker and K R Drinker, Boston —p 53
Medical Supervision in Factories T M Legge, London —p 66
Pharmacology of Heavy Metals W Salant —p 72

Journal of Laboratory and Clinical Medicine, St Louis

June 1920 5 No 9

*Botulism from Canned Ripe Olives H W Emerson and G W Collins Ann Arbor Mich —p 559
Chemical Changes in Blood in Disease III Creatinin V C Myers, New York —p 566
Hemostatic Agents H C Hamilton Detroit —p 574
Action of Chloretone on Animal Tissue T B Aldrich and H C Ward Detroit —p 583
*Classification of Streptococci Isolated from Normal Throats by Sugar Fermentations L Arnold, Nashville Tenn —p 587
*Classification of Streptococci Isolated from Influenza Throats by Sugar Fermentations L Arnold Nashville Tenn —p 591
*Use of Tethelin in Case of Multiple Bedsores H Carr —p 593
Anaphylaxis and Allied Phenomena in Relation to Disease T H Boughton Akron Ohio —p 597
Selection of Sugars for Bacteriologic Work P Masucci and G P Ewe Philadelphia —p 609
Simple Apparatus for Obtaining Blood Samples P G Woolley Detroit —p 612
Lange Reaction in Lethargic Encephalitis I C Brill and R L Benson, Portland Ore —p 613

Botulism from Ripe Olives—Emerson and Collins suggest that menace to life and health from olive poisoning should be removed by adequate government supervision of the plants This supervision should include the fish packing and canning plants

Streptococci in Normal Throats—Of 134 average throats examined bacteriologically by Arnold 50 74 per cent were carriers of hemolytic streptococcus, and 91 per cent were carriers of nonhemolytic streptococcus One hundred and seventeen strains of hemolytic and eighty-seven strains of nonhemolytic streptococci were classified by Holman's classification

Streptococci in Throats of Influenza Patients—Of 116 cases clinically diagnosed as influenza, fifty-six were positive to hemolytic streptococci, making 48 2 per cent positive One hundred and sixteen cases were positive to nonhemolytic streptococci, making 100 per cent positive

Tethelin for Bed Sores—An instance of successful treatment by tethelin, a lipoid prepared from the anterior lobe of the pituitary body, of a case of delayed or arrested healing of bed sores which did not improve under any of the customary procedures is recorded by Carr Tethelin incorporated in a lanolin base was applied

Journal of Medical Research, Boston

January 1920 41, No 2

*Amebas of Cecum of Common Fowl and of Turkey Endamba Gallinarum sp n and Pygolimax Gregariniformis Gen E E Tyzzer Boston —p 199
Effects of Administration of Chaparro Amargosa on Intestinal Protozoa of Turkey E F Tyzzer Boston —p 211
Transmission of Blackhead in Turkeys The Common Fowl as a Source of Infection E E Tyzzer Boston —p 219
*Incidence of Bovine Infection in Tuberculous Meningitis N Novick New York —p 239
*Comparative Study of Mechanism of Wound Healing L Loeb St Louis —p 247
*Compensatory Hypertrophy of Thyroid L Loeb and C Hesselberg St Louis —p 283
Differences in Results of Various Kinds of Syngenesioplastic Transplantation in Dependence on Relationship between Donor and Host I Loeb St Louis —p 305

Chaparro Amargosa in Endamebic Infections—Endameba gallinarum has with rare exceptions disappeared from the dark excrement of turkeys under treatment with chaparro amargosa or Mexican bitter bush This finding lends support to the results obtained by others in the treatment with chaparro amargosa of endamebic infections of man Trichomonads have shown no diminution, and apparently are unaffected by chaparro A coccidium, *Eimeria avium*, has disappeared in the majority of the treated turkeys

Bovine Tubercle Bacillus in Tuberculous Meningitis—Forty-eight strains of tubercle bacilli have been isolated by Novick from the cerebrospinal fluid of forty-eight clinical cases of tuberculous meningitis Three of the strains proved to be of the bovine type

Physiology of Wound Healing—An attempt is made by Loeb to explain theoretically the various phenomena measured during wound healing The reactions seen in wound healing are considered essentially as reactions of cells toward foreign bodies

Hypertrophy of Thyroid—The effect of homoiotoxins on hypertrophy of the thyroid, the changes in weight in the host as a factor in compensatory hypertrophy, and phagocytosis in the hypertrophic thyroid are discussed by Loeb and Hesselberg

Laryngoscope, St Louis

June 1920 30, No 6

Treatment of Cicatricial Web Stenosis of Larynx and Trachea H L Lynah New York —p 343
Exophthalmos and Third Nerve Palsy Due to Acute Empyema of Posterior Ethmoidal Sinus Cured by Intranasal Operation D T Vail Cincinnati —p 357
Acute Middle Ear Infections in Children from Standpoint of Pediatrist L E La Fetra New York —p 357
Acute Middle Ear Infections in Children from Standpoint of Otologist T L Saunders New York —p 361
Deep Cervical Abscess and Thrombosis of Internal Jugular Vein H P Mosher Boston —p 365
Treatment of Brain Abscess W Sharp New York —p 376
New Form of Medication for Nose and Nasopharynx W Freudenthal New York —p 381
Two Cases of Foreign Bodies in Bronchi C J Imperatori New York —p 386

Medical Record, New York

July 10 1920 98 No 2

Interpretation and Clinical Significance of Uterine Hemorrhage E Novak Baltimore —p 43
*Parenteral Protein Treatment of Arthritis Milk Injections Relation to Anaphylaxis M Schulman New York —p 47
Infected Apices of Teeth and Pyorrhea Alveolaris A Westlake New York —p 52
*Kidney Function in Case of Bichlorid Poisoning H Elwyn and E P Flood New York —p 56
Mental Complex H Laveson New York —p 58
Treatment of Influenza D Greenberg New York —p 60
Influenzal Pneumonia Complicated by Empyema in an Infant A Lobell New York —p 62

Milk Injection Treatment of Infectious Arthritis—The experience which Schulman has had with parenteral protein treatment was almost exclusively with milk as the protein and with infectious arthritis as the disease, and is limited to about sixty cases He emphasizes that there seems considerable warrant in reports of clinical experience for the therapeutic use of parenteral protein, and that, although the method had its origin before there was satisfactory explanation of its mechanism yet approach to an understanding has been accomplished The method has met with considerable success in various forms of arthritis, but practically all the work reported outside of German literature has been with intravenous injection of bacterial vaccine The results which Schulman has obtained from milk have been gratifying in the great majority of cases with results that make him enthusiastic about its use in gonorrheal arthritis The method consists in injecting intramuscularly cow's milk that has been sterilized by boiling for about five minutes, and subsequently cooled to a comfortable temperature The initial dose for an average sized adult is 4 c c The injection is generally repeated every other day, and the dose is increased by 1 c c at every injection The total number of injections required varies with the individual case, and may be anywhere from two to ten The increase in dosage also is not a fixed and constant matter, but will depend on the degree of improvement and more especially on the severity of constitutional reaction that the patient shows To get any good out of the treatment a constitutional reaction must be produced The reaction following in intramuscular milk injection rarely comes on in less than one and a half hours The symptoms rarely last more than eight hours The treatment

is said to be applicable to all forms of infectious arthritis including acute, polyarticular rheumatism but in Schulman's experience gives the most brilliant results in gonorrheal cases

Kidney Function in Mercuric Chlorid Poisoning—The pathologic functioning of the kidney is said by Elwyn and Flood to be as follows With the insult to the kidney the tubular epithelium is necrosed, desquamated, and fills the lumen The kidney is swollen, the capsule is tense and constricts the vessels There is also possibly a reflex vasoconstriction This causes anuria Consequently all excretion products in the blood are retained and the level of the total nonprotein nitrogen and of various nonprotein constituents rises As the glomeruli or small vessels are not diseased the mechanism in producing hypertension is not called into play, or only slightly and in the later stages With the lessening of the swelling of the kidney, and the relaxation of the constricted vessels, filtration at once is resumed and the retained excretion products are rapidly removed Bowman's capsule has become permeable to the proteins of the blood, which appear in the urine these also coagulate and form the ground substance on which various cells are deposited with the formation of casts The blood in the urine originates in all probability from the bleeding capillaries of the necrotic tubules

Military Surgeon, Washington, D C

June 1920 **46** No 6

Preparedness of Medical Department of Navy for War and Medical Department Activities During World War W C Braisted Washington D C—p 587
Typhus Fever in Poland H L Gilchrist—p 622
Ration for Emergencies P C Field—p 630
Comment on Rehabilitation Methods from Neurologic Viewpoint R Sheehan—p 636
Insignificance of Recording Chest Measurements at Nipple Line R M Culler—p 646
Relation of Defective Mental and Nervous States to Military Efficiency K M Bowman—p 651
Training of Enlisted Men of Medical Department G M Blech—p 670

New Orleans Medical and Surgical Journal

June 1920 **72** No 12

Cholelithiasis Associated with Angina Pectoris Case Report D N Silverman New Orleans—p 687
Prophylactic Incisions of Vaginal Outlet During Labor W E Levy New Orleans—p 692
Snail Intermediary Host of Schistosomum Mansoni in Venezuela J Iturbe and E Gonzalez—p 696
Filariasis M Alvarez—p 701

New York Medical Journal

July 17 1920 **111** No 3

*Reports of Unusual Cases Anatomic Diagnosis N B Foster New York—p 77
Stigmata of Degeneration in Feebleminded M W Barr Elwyn Pa—p 80
Types of Carbonated Brine Baths (Nauheim) N P Norman New York—p 83
Results of Operation in Gastric and Duodenal Ulcers G Woolsey New York—p 84
Peptic Ulcer J S Diamond New York—p 88
Gastrointestinal Disturbances in Affections of Ocular Mechanism L W Kohn New York—p 91
Diseases of Right Upper Quadrant of Abdomen M B Kuntler New York—p 93
Treatment of Tuberculosis B S Paschall New York—p 95

Congenital Diaphragmatic Hernia, Aneurysm of Pulmonary Artery—The cases reported by Foster are congenital diaphragmatic hernia—the stomach and small intestine were in the left thoracic cavity the displacement causing a volvulus in the mid portion of the ileum and secondary gangrene of 2 feet of intestine, aneurysm of the arch of the pulmonary artery, two cases of hemolytic streptococcus septicemia taking origin in the genito-urinary tract chloroma primary sarcoma of the pericardium, with extension to the pleura and metastases in the mediastinal lymph nodes likewise those of the peritoneum, hemorrhagic suprarenitis

Public Health Journal, Toronto

June 1920 **11** No 6

Industrial Hygiene J W S McCullough—p 245
Accident Prevention in Automobile Industry F H Moody—p 259
Shop Lighting K A McIntyre—p 266
Plan for More Effective Federal and State Health Administration F L Hoffman—p 276
Child of Unmarried Mother P J Bench—p 282

South Carolina Medical Ass'n Journal, Greenville

June 1920 **16** No 6

Method of Inducing Rapid Growth of Epithelium Over Areas Denuded of Skin by Use of Zinc Oxid Adhesive Plaster Applied Directly to Raw Area L Peters Columbia—p 14
Autointoxication E H Goodman Philadelphia—p 148

Surgery, Gynecology and Obstetrics, Chicago

June 1920 **30** No 6

*Jaundice and Its Surgical Significance C H Mayo Rochester Minn—p 545
Late Treatment of Gunshot Wounds of Head H H Kerr Washington D C—p 550
Congenital Equinovarus Report on 114 Cases C F Elkenbary Spokane Wash—p 555
*Resection of Double Kidney F C Herrick Cleveland—p 560
Bloodvessel Surgery in War B M Bernheim Baltimore—p 564
Case of Tuberculosis of Breast E P Hamilton Kansas City Mo—p 567
*Spermatoceles and Hydroceles Containing Spermatozoa R Winslow Baltimore—p 568
Pseudomyxoma Peritonei in Male Subjects M G Seelig St Louis—p 570
Pelvic Articulations During Pregnancy Labor and Puerperium T W Lynch San Francisco—p 575
Tuberculosis of Joints Rollier's Heliotherapy G Schwyzer Minneapolis—p 581
Postmature Child C B Reed Chicago—p 589
*Short Umbilical Cord C S Bacon Chicago—p 597
Types of Pelvic Infection T J Doerderlein Chicago—p 599
Intussusception Resulting from Benign Tumor of Intestine Report of Three Cases A M Willis Richmond—p 60
Plastic Operations on Rectum H B Stone Baltimore—p 608
*New Method for Use of Wire in Surgery of Bone J M Neff and J G O Malley Chicago—p 612
A Modification of the Usual Method of Performing Pubiotomy H Jellett Dublin Ireland—p 616
A Warning Against Promiscuous Uterine Curettage J W Bovee Washington D C—p 618
Modern Methods in Removal of Projectiles R A Stoney and A K Henry Dublin Ireland—p 621

Significance of Jaundice—Jaundice is a late symptom of gallstones in the majority of cases according to Mayo the result of neglect to recognize the condition or to advise operation in the preventive period The mortality following cholecystectomy in the treatment of cholecystitis with or without stones is low only 1.8 per cent in 2,460 operations performed during a period of three years There were 337 cases in which cholecystectomy and choledochotomy were both done with a mortality of 3.2 per cent In a group of thirty-six cases of very serious obstruction and malignancy cholecystotomy and choledochotomy were done with a mortality of 16.6 per cent Choledochotomy alone was done in a somewhat similar group of forty-seven cases with a mortality of 15 per cent If all the choledochotomies are grouped together however the mortality in the 420 cases is but 5.7 per cent too high a mortality for simple cases of stone and obstruction and too low for the late and complicated cases including the cancers Stones were found in the common duct in 274 of the 420 cases

Resection of Double Kidney—To four other reported cases of resection of double kidneys Herrick adds one

Spermatozoa in Hydroceles—Six cases of hydroceles containing spermatozoa and one of true spermatocele associated with hydrocele are recorded by Winslow He thinks it probable that in some cases at least true spermatoceles rupture into hydroceles and in that manner permit the ingress of spermatozoa into the sac of the tunica vaginalis

Short Umbilical Cord—In Bacon's case the entire length of the cord was only 43 cm It was coiled twice around the neck of the child The distance from the navel of the child twice around its neck to the clavicle was 56 cm

Wiring Fractures—In this method a silver or copper wire of proper gage is passed through drill holes made through both fragments and caught by forceps at each end The wire is drawn taut in opposite directions so as to hold the fragments firmly in accurate apposition This procedure brings the terminal portions of the wire in lateral and parallel contact with each other Over the adjacent parallel wires a

small quantity of liquefied zinc chlorid is applied, and, while tension is exerted on the ends of the wire, the adjacent parallel portions are soldered together by merely running the tip of a soldering iron over them This method is indicated when it is necessary to hold a small fragment in apposition with a larger fragment, and when it cannot be done by the closed method

Tennessee State Medical Ass'n Journal, Nashville

June 1920 13, No 2

Use of Radium in Gynecology J M Maury Memphis—p 41
Drainage of Peritoneum R A Barr Nashville—p 45
Roentgen Ray an Aid to Surgeon C P Cox Greenville—p 47
Arterial Hypertension R L Motley Dyersburg—p 52
Unusual Manifestations of Malaria, Report of Cases E O Jenkins Clifty—p 55
Nasal Reflex Asthma R W Hooker Memphis—p 58
Extra Genital Chancres H Spitz Nashville—p 60
Surgery in Infants L L Sheddan, Knoxville—p 63

Virginia Medical Monthly, Richmond

June 1920, 47 No 3

Operations on Hare Lip and Cleft Palate J S Horsley, Richmond—p 97
Hemorrhagic Pneumonitis G Nelson Richmond—p 103
Empyema of Chest W L Peple Richmond—p 107
Kidney Function W M Copridge West Durham N C—p 110
Stricture of Ureter L T Price Richmond—p 113
Foreign Ideas on Pediatrics J S Foote Washington D C—p 116
Cases of Cerebrospinal Syphilis C B Pritchett Danville Va—p 122
Criminality and Mental Unsoundness J K Hall Richmond—p 125

West Virginia Medical Journal, Huntington

June 1920 14, No 12

Practical Side of Heart Murmur H M Hall Wheeling—p 441
Recurrence of Inguinal Hernia after Operation J R Hunter Huntington—p 447
The Malingerer A M Fredlock Elkins—p 449
Case of Persistent Hyaloid Artery T L Leery Bluefield—p 450
Treatment of Asphyxiated Infant Postpartum Hemorrhage Placenta Praevia and Eclampsia L J Lynch Coketon—p 452

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

June 26 1920 1 No 3104

*Early Symptoms and Diagnosis of Diseases of Spinal Cord F W Mott—p 857
Labyrinthine Reactions of Experienced Aviators D Ranken London—p 860
*Effects of Radium Treatment on War Injuries in Neighborhood of Nerves W C Stevenson—p 862
*Poisoning by Arsenobenzol Compounds Used in Treatment of Syphilis A G R Foulerton—p 864

Diagnosis of Spinal Cord Diseases—Mott emphasizes the necessity of determining by examination whether the case is functional or organic and if organic, in order to form a correct judgment regarding prognosis and treatment, it is essential to diagnose the pathologic nature of the lesion and its anatomical situation The recognition of functional sensory disabilities simulating spinal cord disease is easy the superficial sensibility to pain, heat and cold and touch is lost completely, there is no dissociation, neither the anesthesia nor the pains complained of conform to the anatomic distribution of spinal roots or peripheral nerves The secret of success in the treatment of these functional cases is faith It may take minutes, it may take hours However, among the very numerous cases of functional disability there are many cases of organic disease of the spinal cord with a large halo of functional disturbance, which can be removed by various methods of suggestion, by reeducation and various other forms of encouragement But the fact must not be overlooked that such a patient, in spite of the satisfactory results of such treament, is suffering with a permanent disability, which may progress in spite of improvement by the treatment

Radium in Nerve Lesions—While radium cannot benefit gross nerve lesions, Stevenson found that after a nerve operation or after milder degrees of nerve trauma it appears to aid and to hasten the return of function in a limb It improves the nutrition in the area supplied by injured nerves It may be useful as an aid to diagnosis and in certain cases will indicate or contraindicate the necessity of operation It is a valuable adjunct to other forms of treatment

Poisoning by Arsenobenzol Compounds—Sixteen cases are analyzed by Foulerton In seven cases it was possible to make a microscopic examination of the liver and kidneys after death In nine cases the appearance of jaundice was followed rapidly by death in patients who were either under treatment with kharvisan or for whom the course had already been completed Nothing is known as to the actual condition of the organs in these nine cases The factors of dosage and time appear to have quantitatively but little determining influence on the final result Whether the symptoms appear rapidly after a few doses—or whether they are delayed for six weeks after the completion of a full course of treatment—the final result is the same in the large majority of fatal cases jaundice hematemesis delirium and coma with death within three, four or five days Experiments were carried out to determine whether the benzene constituent has any influence in aggravating the toxic effect of the arsenic The experiments included the injection of rabbits subcutaneously with (1) arsenic oxid (As_2O_3), (2) with the benzene constituent (ortho-amido-phenol) with which the drugs are compounded (3) with arsenobillon and (4) with kharsivan In all of the experimental cases there was a nephritis in addition to the hepatitis The action of the poison, in large amounts on the parenchyma cells of both liver and kidney, appeared to be severe The results of poisoning with the two arsenobenzol drugs were comparable histologically with those obtained in the less acute cases of poisoning with arsenic oxid It appears that the results characteristic of poisoning by arsenobenzol compounds may be produced by the action of arsenic alone The fat metabolizing functions of the liver are directly affected by the action of arsenic oxid in poisonous doses But in view of the serious damage to the liver and kidney tissues in experimental poisoning with ortho amido-phenol it is impossible to ignore the probability that the toxic action of the arsenobenzol drugs may be influenced to some extent by the benzene constituent Foulerton considers it advisable that the use of mercury in conjunction with arsenic should be discontinued, the more especially so in that it is difficult to understand in what way the additional treatment can have any useful effect under the conditions It is very evident, that there is a certain definite risk in treatment with arsenobenzol compounds It is impossible to express the risk in any individual case in the terms of a percentage, but the danger is sufficiently real to suggest that a man who is going through a course of treatment should be kept under careful medical regimen throughout the period of administration of the drug and for some weeks afterward

Edinburgh Medical Journal

July 1920 25 No 1

Treatment of Tuberculosis R Philip—p 1
Influenza W D D Small—p 15
*Influenzal Pneumonia K Petren—p 34
Michael Scot A Thirteenth Century Scientist and Physician J D Comrie—p 50
*Case of Extensive Resection of Small Intestine W Q Wood—p 61
Critical Review Cerebral Ventricular Hemorrhages at and Soon After Birth—J W Ballantyne—p 63

Influenzal Pneumonia Causing Hyperthyroidism.—Petren noted that after influenzal pneumonia a condition of hyperfunction of the thyroid gland may occur, and that it is associated with many of the ordinary symptoms, though exophthalmos and the rise in the relative number of lymphocytes in the blood are absent These cases are neither instances of vagotonus nor of sympaticotonus, for they have reacted promptly both to pilocarpin and atropin and also to epinephrin

Extensive Resection of Intestine—In a case of strangulation of a large umbilical hernia, 7 feet 2 inches of gangrenous bowel were resected from the lower part of the ileum Wood says the surgeon need have no hesitation, from fear as to the effect on metabolism, in removing at least a third of the small intestine

Lancet, London

July 3 1920 2 No 1

Universities in Medical Research and Practice T C Allbutt—p 1
Fibroids Lipomas Dermoids and Polypi of Stomach and Intestine—J Bland Sutton—p 5
*Bone Grafting of Fractured Mandible G Chubb—p 9
*Paratyphoid C Bacillus as a Cause of Paratyphoid Fever L S Dudgeon and A L Urquhart—p 15
Syphilitic Aortitis S B B Campbell—p 19

Bone Grafting Fractured Jaw—Sixty consecutive cases of bone grafted mandibles are reported by Chubb Of these all but two were free autogenous grafts from the ilium Fifty-one possessed edentulous posterior fragments, and in forty of these the loss involved the region of the angle In sixteen of the latter the loss involved the ascending ramus also Firm bony union was obtained in fifty-six of the cases, 93 per cent of the series

Paratyphoid C Bacillus Vaccines—From experimental data it is concluded by Dudgeon and Urquhart that as an antigen for the preparation of typhoid and paratyphoid (A, B and C) agglutinating antiserums the heat-killed and formol-killed vaccines are of greater utility than the acid dextrose if the subcutaneous method of inoculation is employed but the acid dextrose vaccine gives an equally good result if paratyphoid vaccines are injected intravenously

Medical Journal of Australia, Sydney

June 5 1920 1, No 23

Enteric Infections F B Lawton—p 523
*Modification of Bezidin Test for Occult Blood S Penn—p 525
*Midtarsal Dislocation J G Edwards—p 526
Heart Irregularities J Macdonald—p 526
Xanthoma Multiplex W McMurray—p 528

New Benzidin Test for Occult Blood—To a thin smear of feces on a microscopic slide, Pern adds two or three drops of glacial acetic acid spread evenly with a wooden match and warmed over a match or spirit lamp Then a drop or two of benzidin dissolved in alcohol is added Finally add a drop or two of hydrogen peroxid Almost immediately a dark blue color will appear The claim is that it is done very rapidly and that it is far simpler to perform than the usual test tube test and free from errors

Midtarsal Dislocation—A case of dorsal dislocation of the anterior end of the talus is reported by Edwards

June 12 1920 1 No 24

Diseases of Lungs in Australian Imperial Force (Egypt) F G Griffiths—p 545
*Skin Sensitivity to Koch's Old Tuberculin under Dispensary Conditions D Luker—p 548
Two Cases of Bullet Wounds I Morgan—p 552
Case of Lethargic Encephalitis E T Smith—p 553

Skin Sensitivity to Tuberculin Test—The multiple papillary cutaneous test of Ellis is regarded by Luker as a reliable time saving, tentative method of preliminary sifting of cases into such classes as (*a*) Clinically active, (*b*) doubtful, (*c*) quiescent (*d*) nontubercular Though the test results of these carefully determined minimal effective doses furnish no reliable data as to the amount of lung involvement, yet they give some criteria as to the toxemia present. The test is a valuable guide in estimating the threshold of probable reactions to Koch's hypodermic test or the optimum commencing dose in tuberculin treatment In the routine examination of individuals presenting no obvious defects an intradermal injection of 0 0001 c.c old tuberculin compared with a similar control of physiologic sodium chlorid solution would serve as a quick reliable way of differentiating candidates into clinically affected and doubtful classes

Practitioner, London

July 1920 105, No 1

After Treatment of Surgical Cases D Power—p 1
Surgical Complications of Dysentery R J McNeill—p 11
Early Symptoms of Cancer S Pringle—p 26
Therapeutic Value of Hope C W Chapman—p 33
Heart in Exophthalmic Goiter J S Goodall—p 37
Eczema or Seborrhoeic Dermatitis in Children F Gardiner—p 47
Immediate Treatment of Venereal Disease E T Burke—p 55
Syringing Ears T S Wilson—p 70
Amputation of Middle and Ring Finger by Transplantation of Web V P Sherwood—p 71

Annales de Medecine, Paris

1920 7 No 2

Ascitic Form of Liver Hydatid Cyst A Robin and others—p 85
*Diabetes and Hyperthyroidism M Labbe—p 95
Syphilitic Stenosis of Trachea A Cade and P Brette—p 104
Exostoses After Distant Nerve Wounds Nathan—p 109
*Meningococcus Septicemia J Renault and A Cain—p 114
*Incubation of Tuberculosis R Debre and P Jacquet—p 123
Functional Insufficiency of the Liver M Labbe and H Bith—p 138

Diabetes and Exophthalmic Goiter—Labbe reports five cases which confirm the possibility of diabetes of thyroid origin In a series of experiments on rabbits sometimes thyroid treatment reduced the capacity for sugar combustion other times it increased it, in others thyroidectomy had a similarly variable effect The hyperthyroidism exaggerates the nitrogen metabolism and this explains the special tendency to acidosis Iodin seemed to have a favorable action on the palpitations tachycardia and glycosuria The sugar in the urine dropped from 208 to 71 gm in a month in one case under iodin while the general health improved The data presented confirm the assumption that the thyroid has something to do with carbohydrate metabolism

Purpura with Meningococcemia—Renault and Cain present evidence that the purpura is a manifestation of septicemia and that the diagnosis can be made by cultivating the serous fluid from the purpuric lesion or by histologic examination of a scrap of tissue from it

The Debut of Tuberculosis—Debre and Jacquet analyze the conditions in three infants known to have been contaminated by the mother at a certain date The period before the infant became capable of responding to the intradermal tuberculin test was shorter the older the infant and the greater the amount of tubercle bacilli involved During this *periode anergique* as they call it there are absolutely no clinical manifestations to attract attention to the infection The minimum period seems to be six days and the maximum judging from their experience, is four months

Archives Medicales Belges, Liége

October 1919 72, No 10

Tardy Sequels of Wounds of Chest F Sergent—p 541
Early Diagnosis of Gastric Cancer H Koetlitz—p 564
Graphic Records of Nystagmus M Stassen—p 574

February 1920 73 No 2

*Vaccine Therapy of Gonorrhea F van den Branden—p 99
Aneurysm of Basilar Artery A Leroy—p 139
Modern Conceptions of Hematology F Dauwe—p 146

Vaccine Therapy in the Complications of Gonorrhea—Van den Branden remarks that the best results were always obtained with vaccine of recent production He used a stock vaccine and there was no eruption from the 1 500 injections except in two instances and these were mild The relief from pain that follows the injection is a great advantage In 57 cases of acute epididymitis twenty two days was the average stay in the hospital, in 18 with an average of twenty four days the cure was integral in 17, averaging fifteen days a slight doughiness was left and in 22 even fifty days of hospital treatment did not banish entirely a small area of hardness

Archives de Medecine des Enfants, Paris

June 1920 23 No 6

Mongolian Blue Spot in European Children J Comby—p 321
*Active Immunization Against Diphtheria F Gorter and A ten Broek Hummink—p 338
Tardy Suppuration After Appendicitis J Nobecourt and H Stevenin—p 353
Pancreatitis in Children Two Cases J Thelip—p 357
Influenzal Meningitis and Meningism T Reh—p 361

Active Immunization Against Diphtheria—This communication from Leyden states that 375 children in a school where there had been twenty cases of diphtheria were injected with a mixture of diphtheria toxin and antitoxin and the production of antibodies was supervised by the Schick test Preceding this attempt at active immunization nine teen adults had been treated and controlled in the same way Of the 271 children who showed a positive Schick reaction before the

injections, it became completely negative in 138 and dubious in 49, but persisted positive in 40 In the 104 with a previous negative Schick reaction, it persisted negative in all It is thus possible, without risk for the children, to increase the antitoxin content of their serum by injecting diphtheria toxin not completely neutralized with the diphtheria antiserum The antibodies appear in the serum about three weeks after the beginning of the immunization, and disappear from the blood in about a year and a half or two years The antibody content can be supervised with the Schick reaction, but the Romer method is superior for the direct determination of the antitoxin in the blood When the vaccinated children had lost the antibodies from their blood, by the end of the second year, a new injection of the toxin-antitoxin induced a remarkably sudden production of antitoxin suggesting that the cells had acquired immunity against diphtheria

Bulletin de l'Academie de Médecine, Paris

May 11 1920, 83, No 19

*Respiratory Insufficiency of the Apex F Sergent —p 425
Organization of Hygiene Institute at Paris G Hayem —p 436
*Arthritis After Hexamethylenamin P Marie and P Behague —p 443
*Syphilitic Intracranial Complications of Otitis E J Moure —p 450
Lethargic Encephalitis Ducamp and others —p 451

Respiratory Insufficiency of the Apex—Summarized July 24, 1920, page 276 when published elsewhere

Hip Joint Disease After Ingestion of Large Amounts of Hexamethylenamin—Marie and Behague report two almost identical cases The young men were prisoners in Germany, and they both took clandestinely large amounts of hexamethylenamin to induce factitious hematuria They secured the desired exchange as advanced renal tuberculosis was diagnosed Each took repeatedly a daily dose of 100 gm The intense and painful hematuria which followed subsided two or three days after suspension of the drug Both seemed to be entirely well after their return to France, but each developed ten months or eighteen months later, arthritis of both hip joints, without effusion, which has seriously crippled them both and shows no signs of improvement In the discussion, Netter mentioned that in five cases he had seen hematuria follow hexamethylenamin in fractioned doses of 1 or 2 gm daily Bazy recalled that hexamethylenamin is the discovery of Bardet, a French physician, who named it formin

Intracranial Complications of Otitis—Moure urges tentative treatment as for syphilis when otitis media and mastoiditis display certain unusual features or are particularly tenacious In several cases the functional disturbances persisted after the mastoiditis and otitis were evidently healed and the Wassermann test gave positive findings, except in one case, but in all, the treatment for syphilis was followed by a prompt cure A recurrence in one case confirmed his diagnosis as necropsy revealed the softening of a gumma in the cerebellum as the cause of the fatal acute meningitis

Bulletin Medical, Paris

May 29 1920 34, No 28

*Treatment of Edema C Achard —p 487
Pathogenesis of Edema A Leblanc —p 491
*The Paradoxes of Edema P Ameuille —p 495
Semeiology of Edema of the Face Gastinel and Bouteiller —p 496
French Medical School in Western Africa A Le Dantec —p 502

Edema—Achard remarks in the course of this study of the treatment of edema in general, that abstention from salt does not seem to influence the dropsy unless the subject is taking food Those who are not eating and drinking—although thus abstaining completely from salt—do not lose their edema It seems to be necessary for resorption of the fluid for the organism to be doing a certain amount of nutritional work, indispensable for the play of the interchanges He says that of all the drugs advocated in treatment of edema, theobromin and digitalis are the only ones that we should retain He never obtained any results with Pathault's method of applying to the limbs compresses dipped in a very strong solution of salt, aiming to draw the excess of fluid out through the skin The reabsorption of large amounts of edema fluid has sometimes induced nervous disturbances, headache, torpor, convulsions and even hemiplegia He had one case of transient paralysis during a medicinal diuresis in heart disease They usually subside harmlessly, but have been known to prove fatal Various theoretical explanations have been proposed

Paradoxes of Edema—Ameuille queries among other things why certain edemas seem to escape the action of the laws of gravitation while others obey them so closely, way the condition in chronic edema often varies from day to day when conditions seem identical in other respects, and why edema in some subsides under abstention from salt and in others keeps up or even increases

Gynécologie et Obstetrique, Paris

February, 1920, 1 No 2

*Incision of Cervix to Aid Delivery V Cathala —p 113
*Incision of Cervix to Aid Delivery J Olow (Lund) —p 131
Epitheliosarcoma of Mammary Gland Bergeret and Botelho —p 139
Large Vulvar Tumor Two Cases H Bouquet (Tunis) —p 149
Case of Bilateral Hermaphrodism with Bisexual Glands E Briau and others —p 155
Bases and Technic for Radiotherapy of Fibromyomas G Detre —p 181

Incision of Cervix to Promote Delivery—Cathala gives a diagram which shows the location of the incision according to the existing degree of dilatation of the cervix Properly done this means of facilitating delivery may render inestimable service without risk for the mother when the prolonged labor and beginning infection etc, are threatening the life of the child Before incising the cervix it is important to make sure that the fetal head can pass the zone in question without stretching it There is no chance for laceration of neighboring organs or hemorrhage or infection if the incisions are made on the median line and intravaginal One of the fourteen women he has thus treated has passed through another pregnancy since without mishap He cuts the cervix with straight scissors from the external os to the junction with the vagina stopping 1 mm short of the mucosa of the vagina In his earliest cases he sutured at once, but now sutures at the end of childbed unless he finds the parts perfectly healed The incisions shrink to insignificance with the involution of the cervix

Incision of Cervix During Delivery—Olow reviews the arguments for and against surgical procedures to promote delivery, and describes his own method He cuts the anterior lip of the cervix to the vaginal fornix and continues the incision on the anterior wall of the vagina for several centimeters With the finger the bladder is detached and the cervix cut still higher and so on, until the peritoneum of the vesicovaginal culdesac comes into view If this is not considered sufficient for the child to pass, the posterior lip of the cervix is cut likewise The upper end of the incisions is reenforced with a buried stitch the assistant pulling on the threads After delivery of child and placenta, the upper end of the incision is drawn down with the thread, and other stitches are taken to reconstruct the parts, leaving a wick to drain and suturing the vaginal incision There is so little sensation in the region that general anesthesia is not indispensable, merely a little ether for the delivery proper, but as a rule he gives ether from the start to the last suture It takes very little This technic avoids danger of laceration from stretching

Lyon Chirurgical

January February 1920 17 No 1

*The Nerves of the Liver and Bile Passages A Latarjet, P Bonnet and A Bonniot —p 13
*Astragalectomy E Villard and E Perrin —p 36
*Hydatid Cysts of Lung G Pelissier —p 77
*Tendon Heterografts Jalifier —p 97
*Perithyroid Sympathectomy R Leriche —p 109

Innervation of the Biliary Apparatus—Latarjet and his co-workers have been making a special study of the visceral innervation, and describe here their findings, with seven illustrations, so far as the liver and bile ducts are concerned Surgeons pay little heed to the nerves in operating in this region but certain postoperative mishaps may be traceable to avoidable section of some nerve

Astragalectomy—Villard and Perrin give an illustrated description of twenty cases in which the astragalus was removed to correct a vicious attitude of the foot especially varus equinus The results were ideal in many, far surpassing those obtainable by operations on tendons or joints The secret is to suture at once and be persevering in the after-treatment, as the whole comes under the head of orthopedic procedures

Hydatid Cysts of the Lungs—Pelissier has encountered 12 cases of hydatid cyst in the lung in four years at Alger, in 2 of the cases a spontaneous cure followed the bursting of the cyst, the outcome is not known in one case and in another the man died after operation on a concomitant cyst in the liver In the 8 other cases recovery followed operative treatment but recurrence is probable in 2 The others are clinically normal The report in detail is illustrated

Tendon Grafts—Jalifier says that there was no failure in the five cases here described in which he implanted tendons taken from the leg of a calf or dog from six to fifty days before The functioning of the hand is fairly good or very good in all

Perithyroid Sympathectomy for Goiter—Leriche resected the sheath of the superior thyroid artery, from its origin to the pole of the thyroid gland in a young man with parenchymatous goiter from childhood The artery shrank in size at once and also the external carotid, the sheath of the latter having been resected likewise for a short distance The connected lobe of the thyroid seemed to be congested at first but then it began to melt away, as it were By the end of the month there was nothing left to palpate while the enlarged lobe of the other side was of the same size as before Before doing the sympathectomy he enucleated three small nodules in the median region of the thyroid, they shelled out readily with scarcely any damage to the gland so that this preliminary median procedure cannot be credited with the retrogression of the lobe on the side of the denuded artery The results in this case he reiterates, justify further intervention of the kind to modify goiters

Medecine, Paris

April 1920 **1**, No 7 Obstetrics and Gynecology Number

Obstetrics and Gynecology 1914 1918 L Devraigne—p 389
*Pyelonephritis in the Pregnant Couvelaire—p 396
Pulmonary Tuberculosis and Pregnancy L Demelin—p 399
No Safe Method for Painless Delivery M Metzger—p 400
Cancer of the Uterus in the Pregnant A Levant—p 402
*Obstetric Pituitary Treatment L Pouliot—p 407
Treatment of Cancer of Cervix J L Faure—p 412
Levator Ani in Reconstructing Perineum P Descomps—p 413
Radiotherapy of Fibromas Siredey—p 417
Abdominal Hysterectomy for Adnexitis H Duclaux—p 419
Radium Therapy of Uterine Cancer J Gagey—p 423
Aid for Prospective and Nursing Working Mothers Levy Solal—p 426
Spinal Anesthesia in Gynecology and Obstetrics P Delmas—p 431
Allowing Parturients to Get up Early L Devraigne—p 434

Pyelonephritis in the Pregnant—Couvelaire says that the attenuated form is frequently misinterpreted as slight albuminuria is the only symptom but it calls for relative repose, dieting and castor oil The febrile form usually subsides in a week or two and the pain in the kidney disappears under copious drinking purgatives, and antiseptics eliminated by the kidneys When the fever persists, indicating retention, if the kidney is not enlarged he injects into the bladder tepid solution of boric acid and has this retained as long as possible, repeating this three times in the twenty-four hours This sometimes rouses the ureters to contract and evacuate the purulent urine If not do not wait too long before catheterizing the ureter If this is not practicable evacuation of the uterus may restore clinically normal conditions Otherwise operate on the kidney This must also be the rule when the kidney is much enlarged as this implies mechanical obstruction After delivery the woman must be kept under supervision for a long time

Pituitary Treatment in Obstetrics—Pouliot emphasizes that any mechanical cause impeding delivery is a contraindication to pituitary treatment If the treatment whips up the uterus too vigorously, this may induce tetanic contraction He advises never to give more than what corresponds to 0 10 gm of the fresh gland and to give it by intramuscular or subcutaneous injection and not to repeat the dose unless the action of the first is exhausted allowing an interval of two hours at least Other contraindications include everything causing compression of the cord as with breech presentation, or premature rupture of the membranes By heeding these rules pituitary treatment will not be held responsible for mishaps for which it should not be incriminated

Paris Medical

May 29 1920 **10** No 22

Inaugural Lecture of Medicolegal Course Chavigny—p 433
*Pneumococcus Antiserum H C Sloboziano—p 439
*Syphilis and the Endocrine Gland E Schulmann—p 442

Antipneumococcus Serotherapy—Sloboziano's article is mainly devoted to American experiences in this line but he adds that the French have extended the field for serotherapy to many of the complications of pneumococcus infection especially in mixed meningitis Combinations of antipneumococcus and antimeningococcus or antistreptococcus or other serums have proved remarkably effectual in the hands of Dufressine Nobecourt and Lassance and Apert uses them to ward off lung complications in measles and whooping cough

Syphilis of the Endocrine Glands—Schulmann concludes from his review that some derangement of some endocrine gland is responsible for all forms and cases of malformation and abnormal growth Whenever there is a possibility that syphilis is responsible for the endocrine derangement—and this is far more common than generally realized—prompt treatment may ward off further damage attacking the pirochetes with swift and vigorous blows and combating the dystrophy with potassium iodid and organotherapy The intensity of the treatment must be gaged for the patient and the glands involved special caution is necessary with suprarenal insufficiency as any arsenic preparation by the vein might bring on acute disturbance from the superposed poison

Presse Medicale, Paris

June 5 1920 **28** No 37

Inaugural Lecture of Histology Course A Policard—p 361
*Radium Treatment of Roentgen Ray Dermatitis P Degrais and A Bellot—p 364
Ammoniosulphate Copper by the Vein in Treatment of Puerperal Fever H Noire—p 365

Radium Treatment of Roentgen-Ray Dermatitis—Degrais and Bellot report three cases in which radiologists were cured by curietherapy of professional epitheliomatous radiodermatitis Their first patient they relate was an American physician "M E who had been using the roentgen ray since 1903 and ulceration and an epithelioma had developed first on two fingers The lesions had been cut out again and again The third recurrence on the ring finger refused to heal and the back of the hand showed hyperkeratosis and there were violent pains The reaction to exposure to twenty seven filtered millicuries for twelve hours was soon followed by the complete retrogression of the lesions and the cure was apparently complete when reexamined six months later The pains subsided as the skin returned to normal

June 9 1920 **28** No 38

Management of Minor Wound L Berard—p 373
Unrecognized Fractures of the Patella I Moreau—p 374
Subcutaneous Injection of Neo Arsphenamin A Loubat—p 376

Management of Minor Traumatisms—Berard urges that the war experiences have taught the necessity of antitetanus serum with even small wounds and that this lesson should be applied now even to the minor injuries of children's falls We know that the tetanus bacillus may get a foothold even in an erosion of the epidermis scarcely visible to the naked eye In case of doubt especially of injury of the hand feet or face soiled with gravel debris of wood or manure it is better to be on the safe side and inject the antiserum A preliminary injection of 1 or 2 c c a few instants before the main injection of 10 c c will ward off minor serum by effects Whether the antiserum is given or not the wound should be cleared of every particle of devitalized tissue under local anesthesia, if necessary and blister- emp- -rgoing by

watering freely with a 1 per cent alcoholic solution of iodin and then wiping dry the entire wound. This immediate and complete surgical toilet of all injuries, even the apparently most harmless, will not only ward off tetanus, but also the whole train of tendon sheath phlegmons, felons, lymphangitis, erysipelas, etc., which are still far too common.

Fracture of the Patella.—Moreau relates that in a series of ten cases the fracture of the patella had escaped detection, in two cases fracture is claimed but cannot be proved and in three other cases an anomaly in ossification is responsible for the disturbances. He describes the special measures required for differential diagnosis.

Progrès Medical, Paris

May 8, 1920, **35**, No. 19

Lung Extract in Organotherapy. J. Carles and B. Lacroix.—p. 203
Insufficiency of the Liver. M. Loeper.—p. 205
Mineral Waters in Treatment of Pyloric Syndrome. E. Binet.—p. 207

May 15, 1920, **35**, No. 20

Diagnosis of Cancer of Tendon Sheath. J. P. Tourneux.—p. 215
Tracheobronchial Adenopathy. P. Nobecourt.—p. 216
Mineral Waters after Appendicitis. J. Baumann.—p. 219

Schweizerische medizinische Wochenschrift, Basel

June 10, 1920, **50**, No. 24

Arteries Not Active Factor in Circulation. A. Fleisch.—p. 461
The Meinicke and Sachs-Georgi Seroreactions in Syphilis. W. Gloor.—p. 466
Lethargic Encephalitis. T. Tobler.—p. 470. Conclusion.
Volume Bolometric Records of Action of Plain and Carbonated Baths on the Circulation. S. Hediger.—p. 475

Pediatria, Naples

June 1920, **28**, No. 11

*Malarial Radial Paralysis. F. Fonzo.—p. 497
*Streptothrix Meningitis. S. Fabris.—p. 504
Tetanus in Children. G. B. Anselone.—p. 507
Huge Sarcoma in Omentum of Boy of Four. U. Sala.—p. 526

Radial Paralysis of Malarial Origin.—Fonzo lists from the literature the cerebral, spinal and peripheral nervous disturbances for which malaria may be incriminated, and reports two cases in children of 7 and 12 in which the right hand showed the effects of typical radial paralysis. It persists rebellious to treatment in both. Fonzo admits the malarial anemia as a predisposing cause, but ascribes the paralysis to the malarial toxin.

Streptothrix Meningitis.—The 9 months' infant with inherited syphilis developed the meningitis after pneumonia and the streptothrix was found in the spinal fluid. Rutelli has reported a similar case in an infant, and Sindoni six cases, but in five in this group the invasion was evidently secondary in already established meningitis. Kharina has also published a case in an infant of 13 months, in this case as in Fabris', the meningitis had been preceded by pneumonia.

Rivista Critica di Clinica Medica, Florence

April 25, 1920, **21**, No. 12

Case of Traumatic Subdural Hematoma in Centro Parietal Region. A. Furno.—p. 133. Begun in No. 11, p. 121.

May 5, 1920, **21**, No. 13

Hemi-Anhidrosis and Hemihyperhidrosis in Case of Brown-Sequard Syndrome. G. A. Pari.—p. 145.

Anales de la Facultad de Medicina, Montevideo

March-April, 1920, **5**, No. 3-4

Human Alveolar Echinococcosis. F. Deve.—p. 129.
*Stenosis of Duodenum with Pancreatitis. A. Navarro.—p. 144
*Persisting Slight Fevers. A. Ricaldoni.—p. 158
*Thyroid Treatment of Hemorrhagic Syndrome. L. P. Bottaro and J. C. Mussio Fournier.—p. 191

Stenosis of the Duodenum with Pancreatitis.—Navarro's case, he states, was one of the first of hypertrophy of the pancreas ever published, and the first in which the stenosis of the pylorus was traced to this cause. Gastro-enterostomy was done for the stenosis, and reexamination of the woman twenty-one years later has confirmed the correctness of the diagnosis and the benefit from the treatment. He summarizes ten cases from the literature and three others in which the pancreatitis developed in an annular pancreas. In one of the latter, hematemesis and the pyloric syndrome were traced exclusively to the pancreatitis. The records show that with the pancreatitis causing the pylorus syndrome, the biliary passages were absolutely normal, even in the three cases with great enlargement of the pancreas. An instructive symptom of pancreatitis is the drop in the pulse of eight or ten beats when pressure is applied to the pancreas region. This symptom suggests abnormal conditions in certain ramifications of the solar plexus. One child was in the habit of leaning the abdomen against the edge of the desk, and there was hypertrophic pancreatitis. Besides the modification of the pulse, pressure on the spleen brought on vomiting, even when the pressure was not pronounced enough to elicit pain. Villar's patient was a new-born child and the laparotomy disclosed annular pancreas and atrophy of the duodenum, but the infant recovered after gastro-enterostomy. Separating the duodenum from the pancreas might be useful to supplement gastro-enterostomy.

Febriculas.—This is Ricaldoni's term for persisting slight fever and he warns that the temperature may transiently fluctuate a little in the healthy and the normal level may be a trifle higher than usual in some persons. There is never a wavelike or cyclic course as with true fevers. He warns further to be on the alert to detect factitious fever, and he then passes in review the true febriculas, saying that while tuberculosis is the most frequent cause, yet it is frequently incriminated erroneously.

Hemorrhagic Tendency Cured by Thyroid Treatment.—Summarized July 17, page 207, when published elsewhere.

Archivos Españoles de Pediatria, Madrid

February 1920, **1**, No. 2

*Intradermal Tuberculin Treatment of Pulmonary Tuberculosis in Children. J. Garcia del Diestro and B. Cordero.—p. 65. Begun in No. 1, p. 5.
Disease of Epiphysis. Three Cases. Rioseco.—p. 85.

Tuberculin Treatment of Children.—Garcia and Cordero found the subcutaneous injection of tuberculin difficult and dangerous for various reasons, in dispensary treatment of children in their ten years of experience. The intradermal injection by the Mantoux-Jeanneret technic, is comparatively free from these objections and they have been applying this method for three years. They give here the minute details of nine cases and assert that it is the best method for administering tuberculin to children who cannot be kept under strict control, it is much more harmless than the other technics while it is as ineffective as any of them in respect to the tachycardia and the fever and—aside from exceptional cases—has no or only very slight effect on the focal phenomena when the focus is at all advanced. But the tuberculin administered in this way had very often a favorable influence on the weight, the anemia and the appetite. The injection was made once a week, supervising the local reaction and the temperature and weighing the child once a month at least. The weight is the most reliable criterion of the benefit or harm from the tuberculin treatment.

Brazil Medico, Rio de Janeiro

March 13, 1920, **34**, No. 11

*Lumbar Puncture in Syphilitics. O. Clark.—p. 167
Courvoisier's Law. Leonidio Ribeiro Jr.—p. 171
Preventive Antitoxin Treatment of Diphtheria. C. de Rezende.—p. 172

Lumbar Puncture in Syphilitics.—Clark declares that he hopes soon to see the ultramicroscope in universal use as the early diagnosis of syphilis, which is possible only with this, will permit the immediate and complete cure. In neurosyphilis, the meningeal processes are accessible to treatment, but the early clinical cure is liable to be only apparent unless the spinal fluid is found normal on reexamination once or twice a year. The meningeal lesions require early, vigorous and prolonged treatment. When this is the routine practice, we may hope to see tabes and general paresis diagnosed in time for a cure. He reiterates that the Argyll Robertson and similar signs are of no use for the early diagnosis. Clark knows of sudden deaths from lumbar puncture on the seated

patient In three cases tabes assumed a fulminating course after lumbar puncture, tabetics are not able to stand any form of traumatism He has also seen cases of intense gastralgia persisting for a week, after lumbar puncture, in other cases a condition simulating meningitis Ten cases of syphilitic meningitis are described, some of the patients have been apparently cured under vigorous treatment applied early

April 10 1920 **34**, No 15

Cocain and Cocain Addiction S Viera de Almeida —p 235
Influenza A J Ferreira —p 239

April 17 1920 **34** No 16

*Access to Knee Joint A Brandao Jr —p 247
*Temperature of Spinal Fluid Ernani Lopes —p 249

April 24 1920 **34**, No 17

Present Status of Our Knowledge of Paranoia H Roxo —p 263
Chenopodium in Local Treatment of Tropical Ulcer N Botafogo Gonçalves —p 267

Access to Semilunar Cartilages and Crucial Ligaments—Brandão makes an incision at each side of the joint after turning back a U flap of skin Then he saws the patella, sawing out a pear-shaped piece on a broad pedicle the outline suggesting a doll's head and shoulders Turning back the interlocking halves of the patella with its ligament allows ample access to the entire joint and when the parts are replaced they automatically fit together as in a mortise The more strain on the joint, the closer the coaptation Five illustrations show the procedure which has been worked out on the cadaver with no clinical experience to date.

Temperature of the Cerebrospinal Fluid—Lopes has found that the lumbar puncture fluid is usually a tenth of a degree below the axillary temperature and nearly five tenths below the rectal temperature He suggests that it might prove useful for diagnosis and for intraspinal injections to know the exact temperature of the cerebrospinal fluid A thermometer might be devised to be introduced like a guide inside a needle or tube

Revista Española de Medicina y Cirugía, Barcelona

February 1920 **3** No 20

*Sugar in Therapeutics E Perez Noguera —p 57
*Laryngectomy Ricardo Botey —p 65
*Prolapse of the Uterus Soler Julia —p 67
Lethargic Encephalitis F Tous Biaggi —p 73
Bossan and Balvay's Vaccine in Treatment of Tuberculosis Remigio Dargallo —p 77

Sugar in Therapeutics—Perez Noguera reviews the wide field of the use of sugar in therapeutics from the Arab physicians in the days of Avicenna to Lo Monaco's subcutaneous injections in treatment of pulmonary tuberculosis The reports with the latter he says, have been contradictory few reporting actual benefit but he cites excellent results obtained with sugar in treating athrepsia in infants, in inducing diuresis in local treatment of wounds and as a temporary food with gastric ulcer, etc

Laryngectomy—Botey gives an illustrated description of his modification of Glück's technic for laryngectomy, and of one of the cases in which he has applied it successfully Instead of using skin flaps alone, which slough off readily he cuts muscle tissue with the flap This protects the pharynx and esophagus and there is no danger of alimentary fistulas as with the original Glück technic

Prolapse of the Uterus—Soler Julia denounces abdominal fixation of the uterus saying that the operation for prolapse should aim to correct its causes hypertrophy of the cervix breaking down of the perineum or relaxation of the ligaments A good palliative when all other measures are impracticable, is to induce stenosis of the vagina with silver wire

Semana Medica, Buenos Aires

Feb 26 1920 **27** No 9

Encephalitis with Narcolepsy J C Navarro —p 283
Argentine Literature on Psychiatry J Ingenieros —p 287
Varying Agglutinating Power of Blood Serum and Plasma V Widakowich and S de Madrid —p 296
Physicotherapy in Tuberculous Spinal Cord Lesions Testa —p 297
Syphilis and Military Exemptions J A Lopez —p 307
Public Hospitals and Charities System in Peru E R Coni —p 07
Necessity for Psychology in Medical Course H F Delgado —p 312
Hexamethylenamin by the Vein in Spirochetosis of Liver and Kidney A Da Matta —p 315

Varying Agglutinating Action of Plasma and Serum—Widakowich and de Madrid have confirmed Moss' statements as to the different behavior of plasma and serum in respect to agglutination They noticed in all their experiences that the blood serum of persons with manifest syphilis agglutinated alien erythrocytes much more intensely than their plasma, while in nonsyphilitics the action of the plasma was always most pronounced in this respect They have not found any reference in the literature to this characteristic difference and add that the varying behavior of the serum and the plasma makes it necessary to test each separately before attempting transfusion of blood

Deutsche medizinische Wochenschrift, Berlin

April 29 1920 **46** No 18

The Learning and Teaching of Surgery C Garre —p 481
Nonspecific Immunity H Much —p 483
*Inoculation Against Typhus B Mollers and G Wolff —p 484
*Subacute Atrophy of Liver H Strauss —p 487
Acetone in the Cerebrospinal Fluid J Koopman —p 489
*Operation for Habitual Luxation of Patella L Drever —p 489
Extraction of Projectiles W T Schmidt —p 491
Dermatitis Caused by Imitation Leather Sweat Band Containing Phenol R V Muller Hess —p 491 Idem Holker —p 492

Vaccination Against Typhus—Mollers and Wolff state that an effective immunity such as follows recovery from typhus cannot be brought about in guinea-pigs by means of injections of killed typhus virus as they have shown by experiments the results of which have recently been confirmed by Dorr and his co-workers The unsatisfactory experiments with the inoculation of humans are in accord with the animal experiments There is no persisting active immunity against typhus without the preceding specific infection process Analogous to the successful inoculations in other diseases (cattle plague anthrax swine erysipelas) vaccination by injections of living typhus virus mixed with immune serum seems to offer the best chances of success though typhus virus attenuated in some other manner—as in vaccination against smallpox—might also be successful

Subacute Atrophy of Liver, with Ascites, in Relation to Cirrhosis of Liver—Strauss found complicating ascites in over 20 per cent of the cases of atrophy of the liver, and that such cases have a special differential diagnostic interest He also finds from studying a case of his own which he gives in detail and other cases from the literature that there are marked points of contact between subacute atrophy of the liver and atrophic cirrhosis of the liver This may justify the conclusion that the ascites is due to obstruction of the circulation in the region of the portal vein He thinks that these relationships deserve further study both from the clinical and the pathologic anatomic standpoint

Operative Treatment for Habitual Luxation of Patella—Drever describes his method of operating for habitual and chronic luxation of the patella which he has found eminently satisfactory The muscular traction pulling the patella out of its proper place is arrested by cutting across some of the fibers of the vastus externus about 7 cm above the patella and twisting this bunch of fibers at right angles to its former course, and suturing it to the vastus medialis The traction on the patella is then in the opposite direction from before

May 6 1920 **46** No 19

Prophylactic Postoperative Treatment of Cancer F Blumenthal —p 505
Traumatic Neuroses and Their Medicolegal Aspects T Rumpf —p 507
Treatment of Hair Diseases with Soluble Horn Blaschko —p 512
Neuralgia of Dental Origin H Kron —p 516
*Intracranial Injections in Trigeminal Neuralgia F Hartel —p 517
The Meinicke Precipitation Test H Schmidt and R Pott —p 519
Influenza Prophylaxis J Plesch —p 520
Late Rachitis K Stetter —p 520
What is Known of Pathogenesis of Diabetes G Herxheimer —p 522
Rhinologic Hints for the General Practitioner G Finder —p 524

Prophylactic Postoperative Treatment of Cancer—Blumenthal finds that raying of the field of operation can only destroy remaining cancer cells but does not

prevent recurrence The local tendency of the tissues to cancer production still remains Irradiation must be sufficiently intensive, for by inadequate excitation avirulent cells may become virulent It might be better, after operation for cancer of the breast to ray also the sternum, the pectoral region and the supraclavicular and infraclavicular fossae At first the sittings should be four weeks apart, later three months Irradiation may have to be continued indefinitely He has found that small recurring nodules in the skin sometimes react better to radium or mesothorium than to the roentgen rays In all operative cases of breast cancer the healthy mamma must be carefully controlled We should not trust in postoperative irradiation alone, but should use all other therapeutic means arsenic (intramuscularly or intravenously), extracts made from the tumor removed at the operation and autogenous exudates

Intracranial Injections in the Treatment of Trigeminal Neuralgia—Hartel has used this method for seven years and his fifty cases show that a permanent cure of trigeminal neuralgia can be effected by means of intracranial injections of alcohol Permanent analgesia of all three branches of the trigeminus assures a permanent cure He has observed cures *of over seven years' standing following a single injection* In case only partial analgesia is established, recurrences can be expected The recurrence can be cured by repeating the injections In hysterical cases and cases of doubtful diagnosis, intracranial injections should not be given Partial analgesia, omitting the ophthalmic nerve, is technically possible, and is indicated in mild cases in order to spare the cornea, in spite of the fact that this exposes to recurrence He sometimes determines in advance, by means of a roentgenogram, the size of the foramen ovale and whether there are any anatomic peculiarities in that region In 41 cases thus treated over six months ago a complete success was realized in 21 and partial analgesia in 16, 25 have been free from recurrence to date, the intervals since from seven to two years in 13

Experiences with the Third Modification of the Meinicke Precipitation Test—Schmidt and Pott say that in view of the simplicity of this test it should be applied to every serum or spinal fluid, as it seems to be marked by almost as high a degree of specificity as the Wassermann reaction

Munchener medizinische Wochenschrift, Munich

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Tissue Defense in Affinity Diseases F Heilner—p 501
Psychogenic Obliteration of Hearing and Sense of Pain in Man and Animals O Muck—p 503
*Diagnosis of Pyelitis Gravidarum R Zimmermann—p 506
*The Dahne Haschke Artificial Thigh W Meinshausen—p 510
Surgical Diphtheria Harms—p 513
Fracture of Acromion by Muscle Traction J Dubs—p 514
Mercuric Chlorid in Treatment of Influenza Bennek—p 515

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Nature and Cause of Arteriosclerosis W Hueck—p 535 Concluded in No 21 p 606
The Present Encephalitis Epidemic G L Dreyfus—p 538
Neo Arsphenamin in Pyelitis and Cystitis K Kall—p 541
Comparative Frequency of Vincent's Angina Bierotte—p 542
Pediculus Vestimenti in Nuremberg in 1919 Federschmidt—p 542
Case of Lethargic Encephalitis in East Prussia K Kotschau—p 542
Predetermination of Sex F Lenz—p 543

Significance of the Findings in the Renal Pelvis Urine for the Diagnosis of Pyelitis Gravidarum—In investigating the pelvic urine of twenty-four pregnant women, Zimmerman reached the conclusion that the degree of turbidity of the urine and the number of leukocytes and epithelial cells do not furnish a reliable diagnosis for pyelitis gravidarum for the reason that the casting off of epithelial cells into the urinary passages and the elimination of leukocytes into the urine appear to be normal physiologic processes during pregnancy

Experience with the Dahne-Haschke Artificial Leg—Meinshausen thinks that this apparatus marks a step in the right direction in the problem of proper prosthetic appliances after amputation of the thigh, although it is by no means ideal Orthopedists and technicians should labor to perfect the apparatus still further One disadvantage of the appliance is that it requires a new socket after a time—in fact, *rather soon, as the musculature of the stump changes its* shape as the fat is absorbed and exercise strengthens the muscles

Therapeutische Halbmonatshefte, Berlin

June 1 1920 **34**, No 11

*Postoperative Raying of Cancer O Strauss—p 297
*Influence of Endocrine Glands on Skin Diseases E Pulay—p 302
*By-Effects of Phenolphthalein Purges L Silberstein—p 306
*Operative Treatment of Tabetic Gastric Crises H Holfelder—p 306

Postoperative Roentgen Treatment of Cancer—Strauss concludes from his review of the literature on this subject that it is still a question whether postoperative raving is really of advantage or not It is important to collect extensive statistics and ascertain the forms of cancer best suited for it Strauss' own experience has been very favorable

Organotherapy in Skin Disease—Pulay's deductions from what has been published on the relations between skin diseases and the sexual glands are that there is no evidence of any direct connection between disturbances in the genital sphere and abnormal conditions in the skin with the exception of certain anomalies in the growth of the hair He cites *also the falling out of the hair sometimes noted with* uterine fibromyomas and the rapid growing in of the hair again after these tumors have been removed, also the subsidence of seborrhea during a pregnancy On the other hand, the mineral metabolism has undoubtedly something to do with skin diseases Mosse found that ovarian treatment of castrated animals induced pronounced diuresis while the phosphorus content of the urine declined Matthes found increased elimination of phosphorus and lesser output of calcium and magnesium salts under ovarian treatment, after castration the output of each was increased These findings suggest that ovarian treatment might modify certain dermatoses by its influence on the calcium and magnesium metabolism Ischovezco has also apparently established that all organs rich in lipoids like the endocrine glands, are stimulated to extra functioning when lipoids from the same organ are incorporated He injected rabbits with lipoids from the uterus and noted that the uterus became hypertrophied He also noticed an antagonistic action between lipoids from the corpus luteum and from the suprarenals *In conclusion Pulay refers to pityriasis rosea at the meno-*pause as an instance of a skin disease in which changes in the genital sphere are certainly an indirect factor, to some extent at least

By-Effects of Phenolphthalein—Silberstein took a single dose of a phenolphthalein purgative, and plaques developed on his tongue suggesting cancer and forcing him to give up smoking A year later he took another dose and developed a painful stomatitis with herpes on the genitals A woman consulted him recently for general lassitude loss of appetite and a strip of ecchymosis in the conjunctiva of both eyes She had taken seven tablets of a phenolphthalein preparation He warns physicians not to be misled by these consequences of the abuse of this drug

Operative Treatment of Tabetic Gastric Crises—Holfelder says that it now seems to be fully established that the cause of the gastric crises in tabes is an isolated pathologic condition of the sensory nerves of the stomach The motor phenomena are from reflex action By destroying the sensory nerves we put an end to the crises, and there are a number of ways in which this can be done The nerves can be temporarily blocked with paravertebral injection of procain, and this is his practice when the patient is too debilitated to stand thorough operative measures The effect is immediate, but lasts only a few days, it can be repeated, while the patient is regaining strength for the Foerster operation This he regards as indicated in all cases of pronounced gastric crises in which the participation of the vagus can be excluded The latter can be suspected from the epigaster reflex and the coincident disturbances on the part of the heart and larynx In this case treatment requires subphrenic severing of the terminals of the vagus at the cardia, according to Exner But in the majority of cases, the sympathetic fibers in connection with the splanchnic nerves are the ones involved, and these can be severed at the only point where

they can be isolated, namely, at the posterior roots It is necessary to resect the nerves from the fifth thoracic to the first or second lumbar spinal nerves This is done under local anesthesia the patient lying face down the head low with a few whiffs of ethyl chlorid as the roots are severed The suturing of the dural sac is the most difficult part of the operation, but it can be and must be done liquid-tight As the motor function of the stomach is paralyzed by the operation, it is indispensable to conclude the intervention with gastro-enterostomy

Wiener Archiv fur innere Medizin, Vienna

June 1 1920 1 No 2

*Dilatation of the Heart R Kaufmann —p 211
Diabetes Insipidu J Bauer and B Aschner —p 297
Bence Jones Proteinuria in Leukemia A Decastello —p 335
*The Urochromogen Fraction of the Urine M Weiss —p 359
Subchronic Lethargic Encephalitis C Economo —p 371
*Extrasystoles R Singer and H Winterberg —p 391
*Cholesterin in the Blood M Richter Quittner —p 425

Dilatation of the Heart—Kaufmann was in charge of the Vienna military "heart station" where roentgen-ray records were taken of 70 000 men with heart symptoms Of the 500 beds 100 were constantly in use in treatment of abnormally large hearts In the great majority the heart was structurally sound not hypertrophied, but merely enlarged The power of the heart to dilate is one of its compensating mechanisms, but the larger the heart when the dilatation begins, the less the relief and the less complete the subsidence afterward The dilatation occurs just as it occurs with excessive athletic strain, but when the overexertion is frequently repeated, the heart does not get a chance to recuperate between It is not the severity of the exertion which determines the amount of strain but the previous condition of the heart, whether it has been weakened by preceding infectious disease or has not yet reached its full development or has been given improper physical training Some factor of this kind was evident in the eighty-five men with persistent dilatation which has not subsided during the two or three years they have been under observation but in only fifteen did the condition progress to actual insufficiency of the myocardium In examining 400 young men just called to the colors, Kaufmann found dilatation of the heart in 25 per cent after brief military training He adds that there are conditions in the pituitary has not been positively established to date Even with loss of the diuresis regulating property of the pituitary secretion normal compensating processes in the kidneys may ward off diabetes insipidus

Bence-Jones Proteinuria with Leukemia—Decastello reports here his third and fourth case of this combination The Bence-Jones body he says seems to originate in pathologic conditions in the bone marrow and hence it is not influenced by peripheral raying But administration of benzol might reach it in the bone marrow and he suggests that this should be associated with roentgen-ray treatment He cites four similar cases from the literature lymphatic or myeloid leukemia with the Bence-Jones proteinuria all in men The leukemia did not differ otherwise from the usual clinical picture nor the necropsy findings in two of the cases In a case of metastatic cancer in the bone marrow tests for this protein were repeatedly negative In three of his cases roentgen-ray treatment alone materially improved the blood count and general health but the proteinuria was left unmodified

The Urochromogen Fraction of the Urine—Weiss uses ammonium sulphate for enrichment of the substance in the urine giving the urochromogen reaction as he describes

Extrasystoles—Singer and Winterberg analyze a case in which the interference of two rhythms was plainly evident a normal sinus rhythm and an automatic ventricle rhythm interfering and causing the extrasystoles

Cholesterin in the Blood—Richter Quittner reports research which has apparently demonstrated that in normal condition the total cholesterin is divided about equally between the blood corpuscles and the plasma but the free cholesterin is exclusively in the corpuscles and the cholesterin ester exclusively in the plasma In pathologic conditions, cholesterin is found in abundance in the plasma along with a little cholesterin ester

Wiener klinische Wochenschrift, Vienna

April 29 1920 33 No 18

Pathology and Therap[illegible]
Serodiagnosis of Syph[illegible]
Typhoid Bacilli in B[illegible]
Mirror Conden er wit[illegible]
Austria Food Prob[illegible]

or veins in the pia, and in one of these cases there was associated actual pertussis meningitis

Intake of Fluid and Composition of the Blood—Wimberger writes from Pirquet's clinic at Vienna to describe extensive series of tests on seven children from 7 months to 15 years old in which the refractometric findings and the daily variations in weight over long periods were compared with the intake of fluids They demonstrate anew that the concentration of the blood serum keeps at a very constant figure, irrespective of wide variations in the intake of fluids The solid tissues of the body take charge of the excess of fluids, the composition of the blood seeming to be independent of the water content of the body

Thrush—Steinert discusses the clinical picture of thrush and the biology of the fungus responsible for it His attempts to transmit the aphthae all failed When there was associated digestive disturbance, rinsing out the infant's stomach with an alkaline mineral water restored apparently normal conditions in both stomach and mouth without local measures Otherwise, he touched the aphthae with a 1 per cent solution of silver nitrate or gave the child a boric acid teat to suck This latter is particularly useful with diffuse thrush when the child sucks vigorously on it, as the mechanical effect helps

Age and Constitution in Respect to Infections—Huebner has compiled the history of the infectious processes of 190 infants less than a year old The younger the child the less the tendency to contract infections, but the severer the course when once installed

Convalescents' Serum in Prophylaxis of Measles—Degkwitz relates that at the Munich children's clinic about 183 children with measles are admitted annually, and the average death rate is 28 8 per cent for those under 2½ and 4 8 per cent for those above this He injected from 7 to 22 c c of convalescents' serum in young children when another child in family or ward had developed measles, and none of the injected children showed any signs of measles although continuing to sleep, etc, with the measles child, while many of the uninjected children developed the disease The blood for the purpose was drawn from a vein in the arm from seven to ten days after defervescence, a total of 40 c c, which yielded 16 or 18 c c of serum To this a drop of a 5 per cent solution of phenol was added, and the whole kept in a fused ampule in the cellar He queries whether the serum of normal adults most of whom have passed through measles might not have the same protecting potency, but larger doses would probably be required He intends to experiment in this line with the parents' serum both in prophylaxis and in treatment of developed measles, in the hope to ward off pneumonia He regards the results accomplished as very encouraging both for measles and as a hint for scarlet fever

Zeitschrift fur Tuberkulose, Leipzig

April 1920 **32** No 1

Tuberculosis and Housing Conditions in Rostock W Tobias—p 1
Tuberculosis Preventoriums P Hesse—p 8
*Tuberculin Inunction Treatment of Tuberculosis E Effler—p 11
*Contraindication for Artificial Pneumothorax E Rautenberg—p 13
*Iodin Treatment of Lupus K Moncorps and M Monheim—p 23

Tuberculin Inunction Treatment of Tuberculosis—Effler refers to Petruschky's inunction treatment of the tuberculous inhabitants of the peninsula of Hela, near Danzig with which he claimed to have practically stamped out the disease, as was mentioned in THE JOURNAL at the time, March 20, 1915 p 1038 Effler presents evidence that Petruschky s statements were too optimistic, ten cases are known to have developed since with four deaths, among the 300 inhabitants

Contraindication for Artificial Pneumothorax—Rautenberg induced the pneumothorax to arrest recurring hemoptysis in two men Both happened to be just 50, and in both the pneumothorax answered its purpose arresting the tendency to hemoptysis but both men soon displayed difficulty in breathing and the heart action grew progressively weaker with death the twelfth and fourteenth day The chest of each of the men was of a pronounced barrel shape, with rigid walls and a tendency to emphysema of the lungs This combination should warn against inducing pneumothorax.

Iodin Treatment of Lupus—Moncorps and Monheim refer to Bessunger's method of massaging a solution of iodin into the skin and then exposing the region to the roentgen rays The raying liberates nascent iodin, and this induces an inflammatory reaction with ulceration As this heals, the lupus disappears They report thirty-five lupus patients thus treated during the last year, saying that the results to date in two thirds of the cases rank with those of the best with other methods

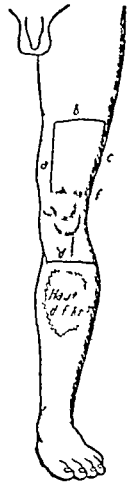
Zentralblatt fur Chirurgie, Leipzig

May 8 1920 **47**, No 19

Operation for Cryptorchism G Lo heissen—p 442
*Cryptorchism and Its Mode of Development K Hofmann—p 443
*Bent Over Flaps in Plastic Operations M Kappis—p 445
Primary Focus with Deep Subpectoral Phlegmons U Hammer—p 448

Cryptorchism and Its Mode of Development—Hofmann has operated recently in seventeen cases of cryptorchism According to his anatomic findings, cryptorchism is attributable to arrested development or a malformation of the canal of Nuck There is no malformation of the testis or the spermatic cord their growth has only been prevented by mechanical causes Normal descent of the testes is possible only when there is normal development of the canal of Nuck. Imperfect development of this canal must necessarily lead to cryptorchism His method of radical operation follows as a matter of course from this conception of the anatomic relations

Bent-Over Flaps in Plastic Operations—Carrying out the suggestions of Neuhauser Kappis has been using twice turned-over flaps in plastic surgery In view of the simplicity and effectiveness of the method he thinks it deserves to be more generally applied In the first sitting a skin flap following the lines *a b* and *c* is dissected and turned over at the line *c f* with the raw surface uppermost Margin *b* of the flap is then sutured in a linear incision *d* which is made just above the defect The proximal margin of the incision *d* is sutured to the margin *b* of the bent-over flap, and the distal margin of the incision is sutured to the raw surface of the flap in such a manner that a wide raw strip of the flap is in contact with and grows to the incisional wound *d* The defect *a b c* is reduced to as small a size as possible and the balance is covered with Thiersch flaps. The pedicle of the flap, at *c f* is cut through gradually at several sittings The defect to be covered is carefully prepared to receive the flap, which is kept on the stretch so as not to shrink. The angle at *d* should gradually be made to approach 90 degrees (which may be accomplished by padding beneath with cotton), so that when the flap is turned over the second time it will not break away from the pedicle In the final sitting the flap is entirely severed at the line *e f* the defect and the margin of the flap are freshened and the flap is sutured over the defect Some of the advantages of this plastic operation are that the sound leg is left free and intact, and the whole operation is a matter of leisurely convenience The pedicle *c f* need not be separated from its blood supply until circulation has been definitely established in the new pedicle at *d* Very narrow bridges will often suffice to keep up the nutrition of the flap The success of the operation is assured provided the flap *a b c* does not necrose which with care working under such favorable conditions, we can usually prevent



a b c outline of flap *d* incision to receive upper margin of flap *Hautdefekt* ulcerated surface to be covered with flap

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

June 5 1920 **1** No 23

Infant Mortality at Rotterdam Before and During the War J Sanders—p 2017
Medical Service in French Aviation Department P M van W Palthe—p 2033
Epidemic Encephalitis J J Hacke—p 2045
Mastoiditis After Healed Otitis G von Gangelen—p 2055

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THE FUTURE OF THE PHYSICIAN*

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NEW YORK

Must we not provide good physicians for the state, and must not these be such as have been conversant with great numbers both of healthy and sick people?—*Plato's Republic*

Psychology teaches us that the essential function of the mind is its dealing with the future. Life is one long anticipation, preparation for what is to come, preoccupation with tomorrow. Of course, there could be no outlook without experience. The faculty of anticipation is based on the store of memories as the searchlight depends on electromotive force or the cantilever bridge reaches out ahead in direct proportion to the materials gathered and joined together behind, so the subject of this particular anticipation of the future of the physician is based on an experience of forty years in the practice of medicine. If the cantilever bridge is a good analogy, I ought to be able to project my anticipations forward, then, at least some forty years.

Most physicians of this generation and of all previous generations have busied themselves with diagnosis and therapy, and, of course, among the oldest generations of physicians therapy was the chief study and occupation, because knowledge of the changes in the body produced by disease and of accurate methods of diagnosis are all very recent in the history of medicine. They did not really know very much even about therapeutics in the old days, but they could and did prescribe. Theirs were not exactly shotgun prescriptions—they were more like shrapnel. A famous and favorite prescription for many centuries was the theriaca of Andromachus. It has attained immortality, together with its prescribers and its victims. Andromachus of Crete invented it. Nero promulgated it by order. I will not take time to name its sixty-one components—but in later centuries it was improved in the Codex of the Faculty of Medicine of Paris by the addition of eleven more ingredients—one of these the flesh of the viper—so that in the end the Favorite Prescription was compounded of seventy-two assorted medicaments.

I'm not so sure that we should laugh at this prescription. We might smile a little, with diffidence, with an eye on the future, for our posterity will probably find much to amuse them in our own therapeutic inventions, methods and agents. I wonder what they will say of some of our surgical procedures, our endocrine adventures, our psychanalysis, eye-muscle cutting, removal of submerged tonsils and turbinated bones, teeth-pulling—these therapeutic epidemics among physicians of our day?

No, we must not be amused at the past. We must rather remember that out of all the facts, errors, follies, mistakes, theories, absurdities, assertions, denials, experiments, failures, of these thousands of years our Tree of Knowledge has risen. These were the gropings of a myriad rootlets in the dark for food and drink and strength of hold. Out of this soil our Ygdrasil has grown.

Therapeutics is the oldest department of medicine. I have no doubt there were practitioners of therapy among the Aurignacians 25,000 years ago. It is indeed, an ancient and venerable art. It is also the chief interest of the patient today. He does not go to the physician for diagnosis especially, but for relief, for cure, and his demands are in the words of the old Latin therapeutic formula "Curare cito, tuto et jucunde" to cure quickly, safely and pleasantly. So therapy has had to be thus far the main practical occupation of the physician. To rationalize and improve his therapy he has studied disease, the alterations in the tissue made by disease, the symptoms of the disease, the causes so far as they could be learned, and the infinity of means and methods of diagnosis. And all this material has become so complicated and vast that the medical student of today must needs be an "invincible athlete" to compass it.

Take, for instance, this little fragment of what is required of a medical student today in one of our leading American colleges. It is a syllabus which I find reproduced in Sir James Mackenzie's book on "The Future of Medicine," a book, by the way, which should be read thoughtfully and carefully by every student and physician, and to which I shall refer again later. This is a prospectus of what a student should acquire during his first year of clinical work in the way of technic in special and instrumental methods of examination. It is too long to quote, but I have been strongly tempted to shorten it, to dramatize or put it in the form of vers libre, to make a sort of Whitmanesque poem of it, and it is reproduced herewith. It would have pleased Walt Whitman.

Sir James Mackenzie thus comments on this syllabus:

These are the subjects recommended in one school for the student's study during three half-day exercises per week for six months. When it is understood that even the specialists who employ these methods have only an imperfect knowledge of the meaning of the signs which their methods bring to light, the practical benefit to the student can be inferred. I need not dwell on the state of the student's mind at the end of a six months' course of this kind of instruction, especially when this subject is probably but one of several others pursued in the same spirit.

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*Read before the Alpha Omega Alpha Fraternity, Syracuse, N. Y., April 13, 1920.

Sir James is concerned with the effects on the *student* of this wandering in a maze of technic and mechanical systems

My own query is, what does the *patient* get out of it—the patient who comes to the practitioner for help and relief from suffering? Would the patient who ran the gantlet of all this formidable array of diagnostic mechanisms (and survived the diagnosis) be in the end really any better off, or as well off, as if he trusted himself to some good old-fashioned sensible country doctor?

I met a patient who had had most of these tests tried on him, and he said the experience was most impressive I asked him what the doctor had done for him as a result of these labors He said "He gave me rhubarb and soda, and when I told him that was just what my doctor in Skaneateles had given me long ago, he said it was not rationalized not scientific Then I said rationalized rhubard was having a wonderful cathartic effect on my pocket book"

There is no doubt that ultimate good will result from all this effort at scientific precision It is the road of progress But this work is still mostly for the seekers after truth, the research men of our institutes and laboratories, and the medical student and practitioner should not be so overwhelmed with mechanics and half truths that they lose the power of close clinical observation, the power of giving every possible relief to the sick people out in the world who are their care

FOUR STAGES OF DISEASE

Now to turn again to Sir James' book, I want to call attention briefly to the most important thesis there set forth

In the first place, he points out that disease may be said to progress through four stages

A predisposing stage in which the individual is still free from disease but inherently weak or vulnerable

The early or curable stage, when the disease has not produced any perceptible alteration of tissue and the symptoms are mainly subjective

The advanced stage when the disease has progressed so far as to cause destruction or modification of tissue and when its presence is revealed by physical signs

The final stage when the patient dies and the tissues are subjected to a postmortem examination

We have a vast accumulation of knowledge concerning the third and fourth stages of disease, i e, of the pathologic tissue changes found at necropsy and of the coordination of such findings with the clinical manifestations of the third advanced stage with its active structural changes Now the chief aim in the practice of medicine, to cure the patient, has been almost forgotten in our intense devotion to the pathologic changes in tissues and to methods of diagnosis of disease in its advanced stage when usually irremediable damage to the tissues has already been done

He points out that we have magnificently equipped institutions for the study of disease after the patient has died, and great hospitals for patients suffering from the advanced stages of disease presided over by staffs of skilled, trained and experienced physicians, but few or no attempts are made to train men to detect disease when there is hope of cure

His plea is that we should now study and understand the first and second stages that there are signs and symptoms which we shall some day be able to discover, obscure and indefinite though they may seem to us now, that we should devote ourselves to observation of the predisposing and early or curable stages of disease

It is evident that patients in these early stages do not come under the observation of laboratory or hospital physicians, but, if vaguely uneasy about themselves go to the family physician for advice It is therefore in the hands of the general practitioner to make this new and highly important study of the earliest symptoms These earliest symptoms are mainly subjective, and it is for general practitioners everywhere to intensify their clinical observations of these cases just passing over the borderline between well-being and disease

This to me is the main thesis of this book, and the idea is developed with much suggestive detail

I believe that our immediate opportunity lies in a general, widespread, careful and exhaustive examination of the earliest signs and symptoms This entails a new significance to the study of subjective manifestations, and the development of new means and methods

Before passing to another part of my subject I want to make my position clear in regard to all these modern mechanical innovations in the practice of medicine What I oppose is their too ready acceptance and

PROSPECTUS FOR A FIRST YEAR OF CLINICAL MEDICINE

(After Walt Whitman)

O Neophyte in medicine
In thy first year
Acquire roentgenoscopy,
And roentgenography
And be fascinated
By the simplicity of teleroentgenography
As applied to head thorax abdomen
And all the bones and members
In the clinical laboratory
Learn microscopy and chemistry
In the bacteriological laboratory
Learn to collect materials
Diagnosticate by lens and culture
By inoculation of animals
By virulence tests
Seize the doctrines of immunology
And study agglutinins bacteriolysins
Hemolysins precipitins opsonins and ergins
mphasize Widal and Wassermann
chick and tuberculin
ext absorb rhinoscopy
haryngoscopy laryngoscopy
ranasal transillumination
emonstrate the bronchoscope
And puncture the pleura
Learn speedily sphygmography
Cardiography phonocardiography
Electrocardiography tonometry
And sphygmomanometry
And upon these superimpose

Clinical angiological methodology
Do not neglect odontology
Paradental infection
Pyorrhea alveolaris
The cognoscibility
Of roentgenograms
Of dental films
And if possible oesophagoscopy
Fail not to practice gastric intubation
With test and con rast meals
And contrast enemas
With proper serial survey
By roentgenography
It takes but little time
To know the pancreas
By service of the duodenal pump
And secretory analyses
Whence we proceed to proctoscopy
And rectosigmoidoscopy
And urogenital methodology
With urethroscopy cystoscopy
Ureteral catheterization
And pyelography
Grow competent in neurology
By accurate tests cutaneous
Deep gustatory olfactory
Acoustic vestibular visual
Motor reflex coordinative
Tests of the speech and writing
Sphincters and trophic functions
Adding to this anthropometry

Lumbar puncture electrodiagnosis,
And nervous architectonics
Pay attention to con ciousness
Of the patient as a whole
Not forgetting attention
Perception identification,
Diction feelings moods
Emotions and conative functions
Judged by behavior and conduct.
Then learn how indispensable
For diagnosis and therapy
Are studies of metabolism
Seize the doctrine of balances
Make preliminary tests
Of assimilation digestion absorption
Then determine the metabolism
Of proteins nucleins purins
Carbohydrates fats water
Mineral substances and vitamins
And learn direct and indirect calorimetry
These are only preliminary to the study
Of several amino acid diatheses
Of diabetes mellitus and gout
Thus prepared O Neophyte finally approach
The endocrine glands
By pharmacodynamics
Tests with epinephrin atropin pilocarpin
Till endocrinopathies are laid bare
These simple points are but an item
For first year students who recite em
Next year add more—ad infinitum!

adoption by practitioners all over the land before their real value has been thoroughly and finally demonstrated No one can gainsay the importance of the pursuit of these methods by experts in research laboratories and hospitals, but their exploitation in private practice before their real value or the significance of their findings has been conclusively ascertained is harmful to the profession and, incidentally, sometimes to the patient

For example, a patient rushed into my office not long ago with an armful of electrocardiograms They had cost him $300, and he was frightened to death They were exquisitely done and beautifully mounted, and there were enough of them for a frieze in a refectory He had a simple neurasthenia with the palpitations so common in that disorder There was no heart disease, and the pictures were formidable, unnecessary and expensive It took some little time to cure him of a cardiac hypochondriasis But it is not alone such elaborate machinery as this that is liable to misinterpretation by both physician and patient, even so simple and widely used an instrument as blood pressure apparatus has, I fear, proved misleading to many physicians and a source of much alarm and hypochondriasis to innumerable patients—not perhaps in the hands of experts, but in the hands of their less experienced imitators all over the country

HEALTH INSTRUCTION IN PUBLIC SCHOOLS

Now let me invite your attention to a still more important and fruitful field in the future work of the physician The quotation from Plato at the beginning of this paper suggests that the physicians provided by the republic should be such as have been conversant with great numbers both of healthy and sick people It is the healthy people whom we are now called on to consider We physicians have been so busy studying the seats and causes of disease, diagnosis, pathology and therapeutics that we have almost forgotten the healthy people Yet it seems to me that the physician of the future must make health and healthy citizens his chief concern There are two factors which have militated against our heretofore taking health into consideration First we have been and are too busy with relief repairs and consolation among our clientele to pay much attention to the healthy people about us Second, the healthy people, engrossed in their own objective affairs, slap themselves on the chest, and feel that the world is their oyster and that they can afford to laugh at fate and the doctors There are two serious but not insurmountable conditions I believe that the healthy people and the physicians can be brought together for a common purpose, namely, the reconstruction of the race

The span of life in this country is about sixty years and for a century or so we have had in our minds the extension of this average life span beyond the sixty years But these sixty years are not sixty health years, just sixty years of living, full of more or less ill health and physical decrepitude The "health span" of life, as Dr Eugene Fisk calls it, is a much more important matter than the length of life That "health span" is just about ten years When the robust, healthy citizens referred to learn the fact that no matter how long they live they are certain of only ten years of exuberant well-being, they are going to stop a moment in the rush of things and take thought They are going to insist on physicians lengthening that health span and as soon as the physicians also learn this fact, which few now know, they too will turn their attention to the healthy people and do their part to extend the health span of the race The ailments that impair health are mostly minor and remediable forerunners, perhaps but not the serious disorders from which people die

I hate to recite statistics but I must refer to the oft-quoted rejection of more than one third of the flower of our race between the ages of 21 and 31 in the army draft—nearly a million unfit for service—and among those accepted several hundred thousands in the camps found to have "physical defects ranging from syphilis and gonorrhea to flat-foot"

The British taking in the men of 40 years, rejected 69 per cent as unfit for military service

More than 16 000 000 children of our 22 000 000 now in the public schools have physical defects most of them preventable and remediable such as heart and lung diseases disorders of sight and hearing, diseased adenoids and tonsils, flat feet, weak spines imperfect teeth and malnutrition and among them 1 per cent of mental defect I mention these facts first to show how much work there is to be done by physicians among the supposedly healthy members of any community, and secondly to point out the most promising way in which the problem of health may be made evident to the whole people

We all know how disappointing and almost futile have been our efforts to rouse the people in the matter of public health—the millions expended our health exhibits our health lectures, our clean-up campaigns our pamphleteering—all these expenditures of money and energy have merely scratched the surface The foremost public health worker in America told me one day that our tuberculosis campaigns in certain states have accomplished practically nothing and that in one state where nothing whatever had been done there was as much improvement in tuberculosis statistics as in states where campaigners had done their best work

The point is that we cannot by these methods make clear the matter of public health to the conservative reactionary, more or less fossilized minds of the grown-ups We must reach the whole people in the matter of health through the plastic, receptive minds of the children in the schools

We need but ten minutes daily of health instruction in our schools It should be a thorough system of instruction in all matters pertaining to health with special emphasis on health problems rather than on disease in physical and mental habits in personal hygiene, in public health and sanitation in methods to avoid communicable diseases in the responsibilities of parenthood and in all that relates to nutrition and growth, including foods and food values and food habits

These facts reach the growing child become a part of him and affect his whole attitude toward life Moreover he takes them home and applies them to his younger brothers and sisters the children of preschool age and best of all he teaches his parents these facts and their importance and parents will take and absorb ideas from their children to which otherwise presented they would be impervious

The physician of the future is to be a Master of Public Health He will push and help instruction in health in the public schools He [illegible] ople will flock to him He will fortify [illegible] the

onslaught of disease He will recognize the earliest subjective signs of inroads of disorder and learn to defend his patients from its further encroachment His mission will be to lengthen the health span of life

A FIVE OR SIX YEAR COURSE IN MEDICINE

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PHILADELPHIA

It is generally recognized that the curriculum of the present four year course in medicine is so crowded that expansion of certain courses, to facilitate more thorough instruction and the inclusion of recent advances in the medical sciences, is almost impossible A saving of time could possibly be gained by more coordinated teaching to avoid repetition of instruction in the same subject or subjects in different departments, but even under these conditions it is exceedingly difficult to introduce new subjects to meet the ever increasing demands of a liberal education in modern medicine

For example, the medical student of today should receive more practical instruction in biologic chemistry, immunology and advanced bacteriology, medical zoology, medical drawing, preventive medicine and medical sociology, than afforded by the majority of medical schools at present, also, more recitations conducted by the professors for the purpose of review and coordination, more time and opportunity for conducting laboratory work in connection with the clinical branches and for clinicopathologic conferences, and increased opportunities for elective study and original research in the last year of the course

The majority of medical schools in this country now require that the student of medicine shall have completed a standard four year high school course of study, or its equivalent, plus two years of work in an approved college of arts and science including courses in French or German and in English, physics, chemistry and general biology or zoology, with appropriate laboratory work Some of these schools contemplate raising these requirements to include four years of collegiate work and a bachelor's degree in arts or science

Instead of demanding these two extra years of college work, I believe that medical education will be better served by keeping the entrance requirements at the present minimum and extending the course in medicine one year, or two years if the medical school can guarantee a hospital internship for its students so that the degree in medicine is conferred after the successful completion of at least one year's residence in an approved hospital

If a collegiate degree is demanded for admission to a medical school, the student spends eight years in college after graduation from high school before he or she is prepared for the practice of medicine, and nine years, if one year of hospital residentship is taken, with the foregoing plan the whole time required, including a year's hospital internship, is eight years Furthermore, the student devotes the extra year or two to study in a medical atmosphere, and I believe that the better opportunities afforded for the teaching of the medical sciences will give the student as good an opportunity for developing mental capacity and cultivation as is afforded by the third and fourth years in a college of arts and science For example, a reading knowledge of French or German is usually required for admission, with an extension of the medical course, time is permitted for the teaching of what may be called "medical French or German" during the first and second years, requiring the students to develop sufficiently in these languages to read medicine in one or both with fair success, which is far from being true of the average student under present conditions

By reason of the added facilities for teaching the medical sciences, I believe that all students successfully finishing the first two years' course in medicine should receive the degree Bachelor of Science or Bachelor of Medical Science (B Med Sc), the degree of Doctor of Medicine should be conferred after the successful completion of the entire course of five or six years

A FIVE YEAR CURRICULUM

As previously stated, the added year will permit the extension of certain courses and the inclusion of others, a curriculum as follows could be worked out by the majority of schools, a year embracing thirty-two weeks of from thirty-eight to forty hours a week, and divided into semesters or trimesters as necessary

FIRST YEAR

Anatomy including histology, embryology osteology, syndesmology, topographic anatomy and neuro-anatomy
Physiology
Toxicology
Medical drawing
Illustrated lectures in the history of medicine.
Study hours with special reference to French and German literature with the aid of instructors

SECOND YEAR

Pharmacology, including materia medica and pharmacy
Physiologic and biologic chemistry
General pathology
General bacteriology and medical zoology
Hygiene and preventive medicine
Medical drawing
Study hours with special reference to collateral reading in German and French with the aid of instructors

THIRD YEAR

Special bacteriology and immunology
Special pathology (neurosurgical-gynecologic pathology) and clinicopathologic conferences
Clinical pathology and microscopy
Applied anatomy
Physical diagnosis
Medicine including practical and applied therapeutics and dietetics, medical sociology
Surgery
Obstetrics
Roentgenology and electrotherapeutics

FOURTH YEAR

Medicine including pediatrics, neurology, medical psychology and mental diseases
Surgery including orthopedic and genito-urinary surgery
Gynecology
Obstetrics
Ophthalmology otology rhinology and laryngology
Dermatology and syphilology
Clinicopathologic conferences
Lectures in medical jurisprudence and medical ethics

FIFTH YEAR

Medicine obligatory with associated laboratory work in bacteriology chemistry immunity and clinical pathology
Surgery obligatory with associated laboratory work on concrete cases

Clinicopathologic conferences obligatory
Electives and research in any of the branches given in the first four years, each student being obliged to select a minimum amount of work

COMMENT

The first four years would give a liberal and comprehensive course in medicine, including instruction in the specialties The added fifth year will afford more time for developing dispensary teaching, including sociological medicine and for more laboratory work in connection with the clinical branches, as so clearly emphasized by Dr Vincent[1] The fifth year, by providing ample opportunity for elective studies, will also enable the student to concentrate on one or more clinical or laboratory branches and engage in original investigations under certain conditions to better advantage than at present, without sacrificing the principal aim of the medical school to give a broad and comprehensive course of instruction before the student is permitted to begin specialization

I do not wish to convey the impression of being opposed to a complete collegiate education preliminary to entering on the study of medicine, indeed, this is far from being the case But the time has come when schools must seriously consider the extension of the course in medicine, and to do this without greatly increasing the expense and time required, I believe it is better to keep the entrance requirements as they are at present in Class A schools, extend the course in medicine for at least one year and reward the extra time devoted to the study of medicine with the degree Bachelor of Medical Science at the completion of the first two years' course, and the degree Doctor of Medicine, after the completion of the last three years If the medical school is so situated that the graduate can be guaranteed a year's residentship in an approved hospital, preferably with a mixed or rotating service, this extra and valuable year may be demanded for the degree of Doctor of Medicine, although I do not believe that the majority of schools are in position to adopt this requirement at the present time

TEACHING THE PATHOLOGY OF FUNCTION

HOWARD T KARSNER, M D
CLEVELAND

If the position of pathology in the medical curriculum today were to be described diagrammatically, it might be stated that it occupies the neck of an hour-glass The students receive in the earlier years their conception of fundamental sciences, and as the sand concentrates toward the neck of the hour-glass so are the methods of these fundamental sciences concentrated in the study of pathology, the student later branching out in the clinical divisions to apply to the diagnosis of disease the methods and conceptions acquired in his preceding work In further elaboration it may be stated that the student learns in his first and second years of study the special methods of anatomy, histology, biochemistry and physiology He is then prepared to enter on the study of those changes from the normal which constitute the natural history of disease

Gay[1] has concisely said that "'pathology' is still used to mean morbid anatomy rather than the natural history of disease" Fortunately for medicine however, this conception is gradually being discarded and the term more broadly applied to the alterations of form and of function which go to produce the manifestations of disease Henderson[2] has stated that "a man trained by necropsy and microscope is inevitably a morphologist" Medicine does not suffer from having morphologists among her devotees unless those morphologists are devoid of a sense of proportion and possessed of minds incapable of appreciating the phenomena of function

I wish to express the profound conviction that just as the science of medicine depends on a comprehensive understanding of anatomy in order properly to interpret function, so does the pathology of function find its basis in pathology of form This is not to be interpreted as an indication that alteration of function and alteration of form are parallel, an idea readily controverted in almost any clinical pathologic conference To teach pathology without a systematic course of instruction in pathologic morphology would be as absurd as attempting to teach medicine without the study of anatomy It may very well be that the fields of investigation in pathologic anatomy are not at the present time of such great promise of early and fruitful results as the fields of pathologic function, but this does not by any means excuse the teacher of pathology from omitting morphology as the basis in teaching work

Recognizing the broad scope of pathology as it was conceived by Virchow, we come to a realization of the fact that in the same sense as anatomy is not the science of medicine, so is pathologic anatomy not the science of pathology In agreement with Opbuls[3] I must emphasize that "a thorough understanding of the biologic processes of health and disease cannot be reached by one method alone" In order to convey to students of medicine the proper conception of pathology, we must recognize that pathology in itself is not a science in the same sense that medicine itself is not a science Pathology constitutes a melange of scientific methods, and adopts for its own purposes not only the methods of the premedical sciences but those of the more fundamental pure sciences as well Pathology, without physics and without mathematics is on an extremely insecure basis Few there are who take exception to this point of view as regards investigation in pathology but many still hold to the view that teaching this subject should be confined to morphologic methods The latter fail to recognize that the student of today is the investigator of tomorrow, whether he directs his attention to the practice of medicine or to a life devoted to investigation of disease from a more fundamental point of view The so-called seclusion of the laboratory often leads one to forget that the living patient as he appears for diagnosis represents a problem in investigation

The pathology of Rokitansky was pathologic anatomy but inspired by the stimulus of Virchow and particularly that of Colnheim, pathology took over the method of physiology and chemistry With the epochal work of Pasteur, pathology adopted the

1 Vincent G F Ideals and Their Function in Medical Education J A M A 74 1065 1068 (April 17) 1920

1 Gay F P The Infectious Diseases as a Field of Investigation in Pathology J A M A 67 1763 (Oct 28) 1916
2 Henderson Vardell Clinical Hydrogen Ion Concentration and Duty J A M A 57 (Sept 9) 1911
3 Opbul William Anatomic Structure and Function J A M A 63 521 (Aug 15) 1914

methods of bacteriology, parasitology and immunology As time has gone on, a certain amount of specialization in these various fields has become apparent, but this fact does not exclude the teacher of pathology from being familiar with at least the fundamentals of these methods of examining disease The pathologist who ignores any of these methods is remiss in his duties to his students and his school

If, in the curriculums of most of our medical schools, pathologic anatomy and histology and also bacteriology are given very definite places and allotments of time, there has been, nevertheless, a regrettable neglect of pathologic physiology and chemistry, as well as immunology, in the required work of the student The widespread application of physiology and chemistry in internal medicine, the important utilization of immunologic methods in the diagnosis and treatment of disease, make it essential that the properly trained student must have had work in these divisions as a required part of his training in medicine The student who graduates without training in at least the fundamentals of these subjects is not sufficiently equipped to practice his profession Leaving to chance the possibility that these topics will be touched on in the courses of medicine and surgery is an injustice to students and to the institution Providing for instruction simply by permitting students to take electives in these subjects is almost equally unjust The curriculum that places in a group of electives subjects of fundamental importance is neither well balanced nor properly conceived That this principle will not be conceded by thoughtful teachers seems unbelievable This being granted, there remain the problems of time and place There is no lack of agreement that the medical curriculum at present is overcrowded, but this fact cannot be accepted as an excuse for omitting from the course of study those fundamentals that are necessary I am in agreement with those who believe that in order to accommodate the necessary subjects, the curriculum must make room at both ends of the present four-year course of study This means that the colleges must accept some of the burden of premedical work which is now included in the four-year course, and also necessitates adoption of a fifth year into which may be placed some of the clinical work included in the third and fourth years of the medical course The growth of medical science necessitates procedures of this sort In this way lies success of medical education, in any other way lies failure

The place in which pathology of function is to be taught cannot be single, it must be multiple If the preclinical subjects are to be taught as a part of technical education in medicine rather than as abstract science, it is necessary that there shall be brought to the attention of the students certain variations from the normal which constitute part of the process of disease The clinic concerns itself largely with manifestations of disease, or, in other words, with pathologic physiology in the broadest sense, from which are interpreted not only the outlines of treatment but also the diagnosis of disease The disease is manifested in a group of functional disturbances which may or may not be dependent on demonstrable morbid anatomic alteration of an organ or group of organs The question then arises as to how far one is justified in taking into the course in pathology a consideration of the alterations that accompany the changes of form There is little doubt that the pathology of the dead, so far as it concerns the great bulk of medical students, is a study of death and not of life The ideal of teachers of pathology is to make the subject an exposition of the causes, processes and results of disease Therefore any method that brings clearly to the mind of the student the fact that he is studying, in pathologic anatomy, only the end-results of disease is of the utmost pedagogic importance That these methods include only those of experiments on animals is entirely erroneous, for a proper correlation with clinical branches makes it possible for the clinician and pathologist to cooperate at least in certain exercises, so as to emphasize the fact that the lesion studied is similar to that found in the living patient

The teacher who can attain this ideal can well afford to sacrifice some details of pathologic anatomy or pathologic histology, for his larger object is to aid in the training of physicians, and not simply the production of students with a facile, though evanescent, knowledge of pathologic morphology The advantage of including studies of function in the course in pathology is twofold, in that such a procedure makes the subject a living subject and at the same time is of great value in the development of a well-trained graduate I am by no means insistent that the course in pathology should include the list of experiments published by my distinguished teacher, R M Pearce,[4] in spite of the fact that I am firmly convinced that all these experiments have an important bearing on the subject The student learns more by doing than by seeing others do and, accordingly, it would seem more desirable to have a large number of students do a small number of experiments in which all can partake, than to have a small number of students do a large number of experiments and demonstrate to the remaining members of the class It must be conceded, however, that there is an irreducible minimum of essential experimental procedures, and the individual teacher must accommodate his facilities and training to the number of students in his classes If, however, the student is limited to observation on animals he is likely to lose sight of the application to human medicine, in spite of the most earnest direction of his teachers Therefore a certain amount of clinical correlation[5] should be attempted As an example, one might say that listening to a heart murmur produced artificially in a dog would have relatively little significance unless the student is able also to listen to a murmur in a living patient Correspondingly, the study of alteration of secretory effectiveness of the kidney in an artificially produced nephritis is of little value unless the student can be shown the same sort of test as applied to human cases of nephritis

As concerns general pathology, more particularly the phenomena of inflammation, the mere fact that bacterial infection may produce certain types of inflammation is insufficient unless there is correlated with this the development of immune processes I shall not discuss in extenso the position of immunology in the medical curriculum, that is whether it should be taught in the division of pathology or in the division of bacteriology That it should be a part of the medical curriculum as a required subject is

4 Pearce R M The Teaching of Experimental Pathology and Pathological Physiology to Large Classes Bull Johns Hopkins Hosp 22 249 1911 Karsner H T The Function of the Experimental Method in the Course in Pathology Boston M & S J 167 511 1912

5 Karsner H T The Experimental Method as Utilized in the Clinico Pathological Conference Boston M & S J 170 723 1914

indicated by action taken on the part of certain of our medical schools in the recent past Furthermore, the study of inflammation and infectious disease as a part of general pathology is fruitless unless the immunologic phases are considered and at all times supported by experimental study

The institution of special departments of experimental medicine or of research medicine does not in any way absolve the teacher of pathology from pedagogic methods of the broadest scope or from bringing to the attention of his students, from the experimental point of view and from the clinical aspects, the living nature of his subject

CONCLUSION

Let me express again the firm conviction that pathologic morphology is the fundamental basis of this subject from the teacher's and investigator's point of view, but that this method alone is not sufficient to meet the demands of modern medical education and investigation Time for the study of pathology of function in the course in pathology should be found, even if it involves some sacrifice of detail in the study of morphology The place for teaching pathology of function is in every department of the medical school It may be emphasized in one department or another as local conditions necessitate, but if it be omitted in any department, that department is not fulfilling its proper duties toward the training of students, the advancement of medical education, and the forwarding of the investigation of disease

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A PLAN FOR A GRADUATE COURSE IN PEDIATRICS FOR GENERAL PRACTITIONERS

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The department of pediatrics which offers instruction to graduates should be prepared to give courses of five different types in order to meet the needs of various classes of students These five types should be planned as follows

1 For general practitioners who wish to improve their general knowledge of pediatrics and to become acquainted with the recent advances in the subject

2 For general practitioners or recent graduates who wish to become specialists in pediatrics but not teachers or investigators

3 For those who wish to become teachers and investigators as well as specialists in pediatrics

4 For general practitioners living in the vicinity who wish to familiarize themselves with pediatrics

5 For specialists in pediatrics who wish to undertake special investigations

I shall consider, however, only the first type of course, that intended for general practitioners who wish to improve their knowledge of pediatrics and familiarize themselves with the recent advances in the subject Such a course should be continuous throughout the year and so arranged that physicians can enter it or leave it at any time In this way only can it properly meet the needs of general practitioners, who are not always able to leave their work at a definite time and remain away for a fixed period, as is necessary if a course is given only during a part of the year and is of fixed duration It is of great advantage to them to be able to begin their work the day that they arrive and to continue it up to the time that they have to leave They should, however, be made to understand that it is far wiser for them to take the course for at least a month and better for three months The course should occupy the whole of every day and should be so arranged that it may be taken for a part of the day only or all day for part of the days, if desired Such an arrangement allows physicians to divide their time between pediatrics and some other subject or subjects, if they wish It may be argued that a physician who takes the course for only a week or two, or for half a day for a few weeks, will not learn much about pediatrics This is unquestionably true, but if he attends but one exercise and learns but one new point at that exercise, he is better off than he would be if he had not taken that one exercise For my part I can see no reason why we should not try to teach a man a little, simply because we do not have an opportunity to teach him much

TABLE 1—ARRANGEMENT FOR A COURSE OF LECTURES

1 Diphtheria	20 Acid intoxication
2 Exanthems	21 Diseases of the blood
3 Exanthems	22 Congenital heart disease
4 Infant feeding—metabolism	23 Acquired heart disease
5 Breast feeding	24 Bronchitis and bronchopneumonia
6 Artificial feeding — general principles	25 Pneumonia and empyema
7 Calculations in home modification	26 Diseases of thymus and status lymphaticus
8 Indigestion in infancy	27 Diseases of the kidney
9 Indigestion in infancy	28 Pyelitis and enuresis
10 Infectious diarrhea	29 Tuberculosis in infancy
11 Other diseases of digestive tract	30 Tuberculosis in childhood
	31 Congenital syphilis
12 Feeding of older children	32 Infantile paralysis
13 Premature infants	33 Cerebral paralysis
14 Congenital malformations	34 Feeblemindedness
15 Diseases of the new born	35 Meningitis
16 Diseases of the new born	36 Infant mortality
17 Scurvy	37 Infant welfare
18 Rickets	38 Infant welfare
19 Spasmophilia	

The work of a course of this sort must necessarily be largely clinical It should be given partly in the wards of the hospitals and partly in outpatient departments, in order that the physician may see both ambulatory and bed patients, because, if only one type is seen, the range of diseases covered is limited and the instruction is onesided Special attention should be paid in this clinical work to the newer developments in pediatrics about which the general practitioners are not likely to be well informed Special opportunities should also be provided for instruction in the details of physical examination for those who are weak in it This clinical instruction must, of necessity, be rather unsystematic, because it must depend, of course, on the patients who happen to be in the wards or come to the outpatient departments at the given time

It is important, therefore, to have a systematic course of lectures given as a part of the work This course of lectures should be so arranged as to cover all the more important subjects in pediatrics This can be done in three months, if the lectures are given three times a week, in six weeks, if the lectures are given daily Another course should be begun as soon as one is finished, so that the lectures may go on continuously A student can, therefore, if he stays six weeks or three months, as the case may be attend

whole course, no matter when he begins A reasonable arrangement for such a course is given in Table 1

These lectures should not be of the same type as those given to undergraduates It should be taken for granted that the graduates are familiar with the rudiments of the subjects These should be passed over quickly, therefore, and the chief stress laid on details, the newer developments in our knowledge, and new methods of treatment

Most general practitioners are out of practice in laboratory work or are unfamiliar with the newer methods, especially as applied to pediatrics. Provision should, therefore, be made for instruction in the ordinary clinical laboratory methods This should cover at any rate the examination of the blood, urine, stools and cerebrospinal fluid One afternoon a week is sufficient to do this superficially, but two are better Instruction in the technic of more complicated procedures, such as the Wassermann test and the examination of the blood for sugar and nitrogen, can hardly be given in a course of this sort If graduates wish instruction in laboratory methods of this kind, they should get it in some of the other courses

TABLE 2—SCHEDULE FOR MARCH

MORNINGS	
Monday	
9 a m	Massachusetts General Hospital Dr Talbot and Assistants
12 m	lecture Harvard Medical School Building A Room 208
Tuesday	
9 a m	Children's Hospital Dr Morse and assistants
12 m	lecture Harvard Medical School Building A Room 208
Wednesday	
9 a m	Infants Hospital Dr Dunn and assistants
12 m	lecture Harvard Medical School Building A Room 208
Thursday	
9 a m	Boston Dispensary Dr Ladd and assistants
11 a m	clinic, Infants Hospital Dr Dunn
Friday	
9 a m	Infants Hospital Dr Dunn and assistants
12 30 p m	clinic Children's Hospital Dr Morse
Saturday	
9 a m	Children's Hospital Dr Morse and assistants
AFTERNOONS	
Monday	
3 5 p m	Boston Dispensary Dr Ladd and assistants
Tuesday	
3 5 p m	contagious department Boston City Hospital Dr Place
Wednesday	
March 3	3 5 p m Children's Heart Hospital Dr Eustis
March 10	Walker Gordon Farm Dr Sylvester
March 17	3 5 p m Baby Hygiene Association Clinic 70 Emerald Street Dr Young
March 24	3 5 p m Children's Heart Hospital Dr Eustis
March 31	3 5 p m Baby Hygiene Association Clinic 70 Emerald Street, Dr Young
Thursday	
3 5 p m	Massachusetts General Hospital Dr Talbot and assistants
Friday	
3 5 p m	Laboratory Harvard Medical School Building C H Room 393 Drs Grover Hill Percy and Wyman

The physicians taking such a course should also be given an opportunity, as a part of the course, to see something of the workings of a good social service department and of infant welfare clinics or milk stations They should, in addition, not only be encouraged to read, but also told what to read It is advisable to have a list of the best and most recent literature on each subject prepared and placed at the disposal of the students Incidentally, the student should be given a schedule, showing in detail just what the exercises are each day and where they are held, otherwise he is almost certain to go astray The schedule given in Table 2 is illustrative of a month's work in such a course, as given at the Harvard Medical School

It is comparatively easy to plan a course of this sort, it is another matter to make it a success It cannot be a success unless all the instructors are interested and enthusiastic They must be willing to put as much time and energy into it when there are only two or three students as when there are ten times that number They must always have in mind how much they can give to the students, not how much they can get out of it Such a course cannot be a success unless the head of the department and the older instructors do a considerable part of the teaching It will almost certainly be a failure if the teaching is left entirely to the younger members of the department They should, however, be given their share of the work, as in this way they get an opportunity to lecture and do more advanced teaching than they ordinarily do with the undergraduates Finally, if such a course is to be successful, every one in the teaching staff must be prepared to do his best gladly and enthusiastically at every exercise, realizing that the more of himself he puts into his teaching, the more the students will get out of it

70 Bay State Road

HOW THE PEDIATRIC TEACHING OF NUTRITION MAY AFFECT THE NATION'S WELFARE*

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NEW YORK

In the management of early life, nutrition forms the most important factor, and the building-up process naturally depends on proper food Any serious mistakes made at this time soon show their effects and are difficult of compensation Growth is to be stressed in addition to repair and heat production, and, as the two latter elements need only to be considered in adult life, the child stands in a nutritional class by himself

It is a truism to state that proper nourishment forms the foundation of satisfactory growth and enduring health

The pediatrician is often consulted by the general practitioner in obscure or difficult cases, and he determines what shall be taught mothers concerning nutrition during the period of most active growth, when the physical foundations of the entire population are being laid Therefore, pediatric teaching of nutrition plays an important part in national affairs, although this may not be generally recognized

The importance of this subject has been emphasized by observations during the recent war period The large number of young men rejected by the draft for physical reasons, averaging one in four, at once attracted attention Various investigations have also shown an alarming amount of malnutrition among schoolchildren During 1917 and 1918, the health department of New York estimated that about 20 per cent of the children in the public schools were suffering from malnutrition This condition is not always limited to the poor, but is found to a certain extent among all classes It is thus due to a failure in the proper selection and preparation of food materials, in addition to pov-

* Read before the Section on Diseases of Children at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

erty The question naturally suggests itself as to how much of physical defectiveness and malnutrition is the result of teaching faulty theories of nutrition This subject has at last gotten away from theory and is being based on experiment It is now possible to consider the various theories of infant feeding in the light of knowledge obtained by animal experimentation

The literature of infant feeding during the last twenty-five years has been based principally on divergent theories of pediatric authorities For a long time the steady gain in weight by an infant was considered a demonstration that its food was satisfactory, but many animal experiments have shown that poor growth and rapid gain in weight may go together, and that some individuals who are of satisfactory weight may really be stunted The important thing is to see that gain in weight is the result of real growth and not of simply storing water and fat in the tissues Failure to distinguish between gain in weight and true growth, therefore, may result in poor physical development and malnutrition among children as well as in domestic animals From the standpoint of the infant, insistance on breast feeding, as stressed by Sedgwick and others, will give the best nutritional start If not entirely sufficient, complemental feeding will enable the breast to continue its work The principal mistake has been in neglecting the breast and in holding wrong theories on artificial feeding

A few years ago it was taught that food should be selected according to its chemical composition, as all foods were composed of proteins, fats, carbohydrates mineral matter and water, in varying proportions [1] The suitability of a food thus depended on the quantity of these elements present and artificial feeding consisted in accurately changing and controlling the quantities of these component food substances Much effort and money were expended on chemical analyses of foods and milks But if these efforts were desirable in such direction, they did not go far enough Today it is known that there are many kinds of proteins—the term protein as formerly used having been discontinued, likewise, many forms of fats, carbohydrates and mineral matter Some forms of proteins will produce growth while others will not, some that will cause growth are more efficient in this respect than other forms Not all fats are alike in properties or nutritive value, nor are all carbohydrates It is easy to see how much malnutrition might result from selecting foods on the basis of their chemical composition alone

At another time a great deal of discussion took place over the supposed necessity of adding alkali to cow's milk in feeding infants to make it have the same reaction as human milk It has been widely taught that from 20 to 40 grains of sodium bicarbonate should be added to from 4 to 12 ounces of cow's milk This was then diluted and heated to pasteurize or sterilize the milk in order to make it suitable for infants The heating changes the sodium bicarbonate into sodium carbonate, which is very alkaline This was poor chemistry for the amount added was far in excess of the quantity which would be needed to neutralize the acidity of the milk even if it were sour The real effect was to neutralize the acid of the stomach and throw the milk in a fluid condition into the intestine for digestion There may be times when this procedure will be useful but it must be intelligently employed with the knowledge of what is aimed at and accomplished thereby

Since the discovery of the so-called "fat soluble A" and "water soluble B" of milk and their relation to deficiency diseases the routine addition of alkalis to milk acquires a new interest To quote McCollum [2] "the work of a number of investigators has shown that 'Water soluble B' is readily destroyed when an excess of such weak alkalis as soda are added to food" The necessity or advisability of adding soda to milk for infants has been diligently taught to mothers all over the country and it appears that this practice must be eradicated if milk is to have its full nutritive and physiologic value This is a striking example of a good food being weakened in nutritive value as a result of pediatricians following an incorrect theory

A later and popular teaching has been that foods were of value in proportion to the amount of heat they yielded on combustion, this amount being expressed in calories The animal experiments showing the differences in nutritive value of the various kinds of proteins fats carbohydrates and mineral matters have made clear the inadequacy of this method of valuing foods, even if it were not known that much nutrition does not depend on combustion Under this method very improper foods have been advocated and there can be no doubt as to its responsibility for much bad feeding showing itself in malnutrition, especially in infants and children during the period of growth I have recently called special attention to the fallacies involved in the caloric system of food valuation [3] It is thus evident that much of the theoretical pediatric teaching of nutrition has not been such as to promote the most efficient feeding or the best utilization of admittedly good food There have been those who for many years have persistently advised the use of cereals with milk as the best form of feeding for infants and children, basing their beliefs largely on the practical results obtained The cereals were used with the milk not only for their nutritive value, but for physically adapting cow's milk to the digestive tract of the infant, which is quite unlike that of the calf for which cow's milk is produced in nature

The only objection raised to this teaching was that it did not conform to what was claimed to be theoretically correct As the theories have been found to be incorrect, the proper basis for judgment rests with the nutritional results obtained by the various methods that have been proposed It has been found that milk makes cereals more efficient in producing growth and cereals make milk more suitable for infants from the diluent standpoint

One of the effects of food not being in a physical form that is natural to the digestive tract has been experimentally shown by McCollum and Pitz Guinea-pigs died of scurvy on a diet of milk and oats that did not fit their digestive tracts, but the addition of inert matter which prevented the food becoming too solid in the digestive tract caused recovery from the disease The peculiar anatomic structure of the alimentary tract of the guinea-pig makes it difficult to thrive unless its diet contains a succulent vegetable which gives the feces favorable physical characters

1 Chapin H D The Limitations of Chemistry in Infant Feeding New York M J April 23 1904

2 McCollum E V Newer Knowledge of Nutrition New York The Macmillan Company 1918

3 Chapin H D Do Calories Measure the Value of Food? J A M A 57 1911 (Dec 2) 1 1

and makes them easy of elimination" Many years ago I showed that the proteins of various milks have a developmental function as well as a nutritive value Hardness or softness of the curds depends on the kind of digestive tract they are designed by nature to serve and develop [4]

The practical advantages of cereals with milk as food have recently been demonstrated on a large scale During the late war, Denmark was subjected to a blockade and the people had to be strictly rationed According to Hindhede,[5] beef was so costly that only the rich could afford to buy it in sufficient amounts, therefore, to quote, "reliance was placed on our potatoes and the large barley crop, which was given to man and not to pigs as heretofore, with the results that the pigs died of starvation, but the people received sufficient nutrition The principal food was bread made of whole rye, plus wheat bran and 24 per cent of barley meal, barley porridge, potatoes, greens, milk and some butter People entered no complaint and there were no digestive disturbances" Sugar was not mentioned, as this is not a necessary article of food and has only been widely used for a comparatively short time Various sugars that are frequently consumed in excess are not always necessary and are sometimes harmful It is only during the last three centuries that sugars have been used at all as foods They are not infrequently the cause of faulty metabolism Cases have been recorded in which hyperglycemia has been found with little or no glycosuria [6]

During the year of severe regulation in Denmark the death rate dropped 34 per cent, being 10 4 per thousand Hindhede says "It would seem, then, that the principal cause of death lies in food and drink The people must first have bread, potatoes and cabbage in sufficient quantity, and then some milk If Central Europe had adopted this plan there would have been no starvation or malnutrition It seems to me that the German scientists, as represented by Rubner, have not learned anything from the war"

It will be found that practically all experiments in nutrition, whether conducted on animals or on human beings, show the most efficient foods to be cereals supplemented by milk and green vegetables This is contrary to the common belief that meat, from its similarity to human flesh, is more suitable for conversion into bodily tissue than vegetable protein It should be remembered that meat is not absorbed as such but is broken down into amino-acids, which are then recombined to make the specific body tissues that are peculiar to each species of animal The real test for proteins rests in their supplying the requisite kinds of amino-acid, not whether they are of animal or vegetable origin

One of the most active causes of social unrest and discontent is the high cost of living, and this high cost is largely due to false theories of what is really needed for proper nutrition One way to lessen this high cost is to diminish the use of animal food and depend more on milk, cereals and vegetables Proteins, carbohydrates, and even to a certain extent fats, can thus be satisfactorily administered As food transformers and producers, animals are very expensive To show the efficiency of various food-producing animals as food transformers, that is, to show what proportion of the food they eat becomes available as human food, Jordan [7] has reduced to a basis of dry weight the intake of digestible nutrients and the output of materials suitable for human food, as follows

From 100 pounds dry nutrients Cows produce 18 pounds milk solids, 9 4 pounds cheese solids, 5 44 pounds butter, steers produce from 2 5 to 3 5 pounds meat solids, sheep and lambs produce 2 6 pounds meat solids, pigs produce 15 6 pounds meat solids, calves produce 8 1 pounds meat solids, fowls produce 4.2 pounds meat solids and 5 1 pounds egg solids

Hopkins states that "1 000 bushels of grain has at least five times as much food value and will support five times as many people as will the meat and milk that can be produced from it" Meat can never be cheap unless animals can be fed rough materials that would otherwise be wasted, and dairy products cannot be cheap with labor and feed both high When meat is used, the cheaper cuts, if properly selected and prepared, will serve as well as the most expensive portions

In countries where population is dense, as in Japan and China, meat and milk are not used to any extent because the food needed to produce them can be used to better advantage by the people, and land is so thoroughly cultivated that there is little or no rough, nonutilizable human food material that could be used to advantage by animals Zavitz of the Ontario Agricultural College, in an intensive study covering three years, found that in the case of a steer, for each pound of meat as sold by the butcher there was required about 3 9 pounds of milk, 5 9 pounds of concentrates, 7 7 pounds of hay and 20 5 pounds of succulent feed These data exemplify the fact, already noted, that animals are highly expensive as food transformers

Pediatricians can render the nation no greater service than to start the feeding of infants and children with foods that will be efficient economically as well as physiologically Habits and tastes formed in early years have much to do with food customs lasting all through life, and children should be taught to live on simple, nutritious and inexpensive foods This should form part of their education The palate must be educated as well as the brain

An amusing incident of how opinions change at different epochs on the food question, because of habit, is cited in the following quotation from J Russell Smith [8]

There is a pitiful tale of woe in the State Archives of Maryland, where it has rested since it was sent up to the Royal Governor about 1680, by the inhabitants of one of the islands on Chesapeake Bay They petitioned that he should send them from the royal bounty some food, for they were about to starve They went on to rehearse that their crops had failed and that they had been forced to such extremities by the approach of starvation that they had been compelled to go down to the bay dig up oysters out of the muddy waters and eat them

As the food that is craved, or considered best, is that for which a taste has early been created, it is peculiarly within the province of the pediatrician to influence national food habits Food costs can often be reduced and better nutrition obtained at the same time As an example, one of the future sources of

4 Chapin H D Principles of Infant Feeding as Based on the Evolution of Mammals Arch Pediat July 1903 Biology as the Basis of Infant Feeding New York M J Nov 27 1909 The Function of Milk in the Scheme of Evolution Scient Month January 1916

5 Hindhede M The Effect of Food Restriction During War on Mortality in Copenhagen J A M A 74 381 (Feb 7) 1920

6 Chapin H D and Myers V C Chemical Examination of the Blood in Children, Am J Dis Child 18 555 (Dec) 1919

7 Jordan W H The Feeding of Animals

8 Smith J R The World's Food Resources

protein and fat, as a possible substitute for meat and milk, will be soy beans, which contain twice as much protein and fat as meat Soy bean gruel flour contains 44 per cent protein, 20 per cent fat, 10 per cent sucrose, 4 3 per cent ash, 2 per cent fiber and 4 6 per cent water[9] It has been used successfully in feeding diabetics and also in nourishing infants when cow's milk is not well tolerated By combining this flour with other cereals we may produce a fairly balanced diet that may be administered in the form of bread, breakfast porridge, soups, biscuits and even cake All possible food sources of the world should be searched by scientists to find other food supplies that will be at the same time nutritious and economical This is one of the most fruitful fields wherein a physician can be of service to the state in trying to allay one of the greatest sources of social unrest Finally, trial, experience and results, rather than mere theory, must prove the final test of the utility of any plan of nutrition

ABSTRACT OF DISCUSSION

DR. JOHN FOOTE Washington D C Dr Chapin emphasized the necessity for active interest by this Section in the education of the lay public He says that one out of every four men examined was found to be physically defective The U S Public Health Service says that one out of every three men examined was found to have some physical defect When we remember the large number examined, and realize that at least a million men were suffering from physical defects which curtailed their working and earning capacity we can appreciate what this means economically to the United States Sir Arthur Newsholme the great English authority on public health, said a short time ago that they found a similar condition of affairs in England and that it confirmed a belief they had long entertained that the function of child welfare work in the education of the public was something that should be vested in the local or national health department, in order that it might be enforced They found that in England were a great number of persons for whom they could do nothing because they were suffering from diseases which ought to have been corrected when they were children—perhaps, in the case of some of them, before they were born by proper education of the mother That is the condition existing here now If we are to do anything about it it is properly a function of the physician and particularly of those interested in diseases of children What would we think of a corporation that had no cost accounting system and yet boasted about the great amount of business it did? We have really no cost accounting system in the United States, in respect to infant mortality, in many of the states of the Union no attempt is made to register births, and in some states where birth registration prevails, very little help is given local medical men to enforce it

DR LEWIS W HILL, Boston The general impression prevailing among medical men, as well as among the laity is that children need a great deal of protein food, in order to thrive and grow I do not feel sure that this is true, or that our old standard of 2 gm of protein per kilogram of body weight is correct It may be a good deal less than that Accurate figures of the protein requirements of children are not available Nobody has any adequate idea as to what these requirements are Last summer I saw three boys who bore out very well what Dr Chapin said I never have seen more healthy boys They were athletes, ranging from 12 to 16 years old They were perfectly well in every way They had always been vegetarians The mother of these boys wanted to know whether this was a suitable diet for them They weighed from 10 to 15 per cent more than normal children of their respective ages and they were also taller and bigger than most children of those ages would have been We worked out their nitrogen metabolism and found that they were receiving a very adequate supply of nitrogen apparently Those boys had never had any animal food of any sort and still they had developed normally in every way

DR HENRY DWIGHT CHAPIN New York My object in presenting this paper was to show the wide field that the pediatrician may and should occupy not only in treating individual cases but in approaching broad social questions and this certainly is one of the most important ones At a time when laboring men are striking and crying for porterhouse steaks and everyone is feeling that the food question is so very important we can simplify it a great deal and the time to simplify it is at the beginning of life We can give a thoroughly balanced nutritious diet from the beginning and carry the child through puberty to manhood or womanhood with a thorough development on food that is nutritious and at the same time economical That is the great public question of the day and the pediatricians are going to solve it

9 New and Nonofficial Remedies 1920 Chicago American Medical Association p 177

THE TEACHING OF MEDICINE

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I have been greatly interested in recent articles in THE JOURNAL and elsewhere, dealing with medical education Foster Wood, Symmers Hare, Bastedo and Vaughan have presented various phases of this subject The report of the Congress on Medical Education and Licensure with its committees regarding teachers and teaching is evidence of an increasingly active interest in the problem by that influential body All this is extremely gratifying to those who are teaching medical students because inquiry and discussion always mean betterment of existing conditions Many things might be said for or against numerous questions raised by the foregoing writers or by participants in the congress Instead, I wish to present a view that is broader than any of these, but which at the same time is intimately related to most of them

One burden of many of the articles to which reference has been made is that the curriculum of medical colleges is overcrowded With this all teachers will agree Yet some departments are insistent in their demands for additional hours in the schedule and still other subjects possibly should be added What is to be done? Suggested remedies are few and excepting that of making postgraduate work of waiting subjects, disappointingly indefinite So far as I have read, no one has referred to improvement of existing methods of teaching as a possible aid to the overloaded curriculum I believe that much of a practical nature for the relief of present conditions can and ought to be done by teachers themselves In this way concrete help may be afforded the more or less abstract efforts of authoritative curriculum makers I wish to suggest three ways in which the time now used for teaching what is on the schedule may be lessened If this can be done scheduled subjects now slighted may be given more time and others may possibly be added

1 DEVOTE LESS TIME TO LABORATORY INSTRUCTION

In these days of emphasis on laboratory training as a foundation for clinical medicine and when laboratory expansion is a dominant note this statement may sound as the voice of one crying in the wilderness Nevertheless, I believe that many hours can thus be saved without detriment to the laboratory

student's education I do not say, "Give less laboratory instructions", I do say, "Give less time to it" The two are not synonymous The problem, as I see it, is one of efficiency The business man installs filing systems, card indexes and adding machines, shortens methods, systematizes his work, and is able to accomplish much more in less time, then he takes on more business In my opinion this principle can be applied in our laboratories with a saving of time and no sacrifice of knowledge imparted, in fact, improved methods of teaching should result in the student's learning more in the shorter time

In illustration For seventeen years (exclusive of one year in Siam) I have been teaching morbid histology, and I have acquired a very positive belief that eighty well chosen sections are sufficient for this course, instead of from 100 to 150 or more, as are usually employed With these can be given all the knowledge of morbid histology that a second or third year student should be expected to acquire This statement is based on observation of how students work in laboratories and on the fact that only a very small percentage (one or two) will study sections after leaving the laboratory The exact working out of this reduction problem in each laboratory will in the final points depend largely on the individual in charge Regarding my own method of teaching morbid histology and how I would apply it on the suggested basis, I hope later to write with some detail, that would be out of place in this article, which is intended to be broadly suggestive rather than insistent on personal ideas

Suffice it to say that the eighty sections should be stained by technicians, the student's time being too valuable to be occupied with this work Those sections in which the lesion is well shown by hematoxylin and eosin could be kept as loan collections The others should be freshly stained by van Gieson's stain because many lesions cannot be satisfactorily demonstrated in eosin preparations, though this is often attempted With this fundamental requirement as to sections; with properly systematized demonstrations (didactic and lantern), and a sufficient number of demonstrators, I believe that a practical instructive and quite satisfactory course in morbid histology can be given in 100 hours If so, why use from 175 to 200? We are teaching future practitioners of medicine, not technical laboratory experts, morbid histology is part of a greatly overcrowded course, and the prime object of a medical college is to teach the prevention, diagnosis and treatment of disease Special work may require further histologic knowledge on the part of a few this is postgraduate or vacation work, as all specialties must be

Now, if this reduction process can be applied to morbid histology, why not to normal histology bacteriology, chemistry, physiology? The questionnaire reported to the congress gives to histology (including organology) and embryology 280 hours I am asking those teachers whose composite figures are 280 hours whether, in case an official edict (as may well happen) requires less laboratory time in order to balance the curriculum, they could not give students essentially the same facts in 200 or an even smaller number of hours? I feel sure that if thus presented the students will have no difficulty in acquiring them in this lesser time

In the bacteriologic laboratory are we requiring students to learn the characteristic growth of each organism on six to ten different mediums? This is knowledge which only expert bacteriologists have the least reason for possessing In the physiologic and chemical laboratories are there exercises which theoretically appear desirable but which really are nonessential, or are beyond the capacity of the student to grasp or the curriculum to accommodate? Is biologic chemistry justified in asking for 260 to 280 hours? I ask these questions as a laboratory teacher and a firm believer in the value of laboratory training Are we doing what we should do in the least possible time or can we do this essentially as well in less and hand over to the student a goodly number of hours to be used in the study of patients? I have stated what I believe I can do in my branch

Army officers report that one of the noticeable things in the medical service of the training camps during the war was the inability of graduates of recent years to make physical examinations and give a diagnosis More bedside instruction of students is very properly the suggested remedy But whence are the hours to come? I believe that a not far distant future will point to the laboratories Let us, then, to use a phrase beloved of politicians, have "reform within the party" before it is forced on us from without To maintain the valued place of laboratory training in medical education we should not only avoid undue expansion, we should retrench wherever possible

2 REDUCE THE TIME DEVOTED TO LECTURES

Some lecturers give value received for the hour spent by students listening to them Many do not Why not apply the same principle just suggested for laboratory workers, in some of the following ways, for example? Give only the essentials in an orderly form with outlines and headings that students can follow and incorporate in their notes As a rule, spend little time on theories unless there are no available facts Quotations from literature should have a minimum of space, even as illustrative quotations Textbooks are not to be used as lectures, they are for students to read The lecturer's time is better spent in explaining the content of the book, with homely language and illustration not considered worthy of printing This is because most textbooks are written in fear of critical reviewers rather than with a righteous regard for the student learner Lectures should not be intricate dissertations for the delectation of learned men, but clear, concise presentations of the subject at hand, designedly at the level of the student's understanding Remember you are to hold him to account later for what he has obtained from these hours

I think that one trouble with us as teachers is that we become more or less fanatical and develop the obsession that our branch is the only one really worth while Therefore, we must deliver it to students complete—facts, statistics, theories, speculations, probabilities and even possibilities A very laudable ambition indeed—if possible to execute But the student can take only a very small, carefully prepared, digestible or even predigested portion of this great mass of knowledge and theory He has almost to be desensitized to this foreign protein How easy to give him mental anaphylaxis with a ponderous dose in the shape of a badly prepared, abstruse lecture!

Another reason for lack of preparation and condensation of lectures is pure inertia (Were I not including myself as a teacher in these statements, I would have used the word laziness) It is much easier to say a thing in fifty-five minutes than in forty,

or to devote sixty instead of forty lectures to a subject when it has enough material for 100 or 200 Boiling down, systematizing, outlining selecting, rejecting—all this is time-consuming and tiresome and even vexatious when one has little enough time to keep himself informed of progress in his own branch, to say nothing of related branches But emphatically it is the business of a teacher so to do He has no right to do otherwise It would have been much easier for me to put these few ideas in a ten-page article instead of the length it is But I have no right to ask you to read so much to get a little And yet you can read this or not as you choose, the student must get the substance of his lectures, no matter how it is served

How, then, can we apply the reduction process to lecture courses? By condensing, by giving fundamentals instead of recent unproved speculations and experiments Instead of a continuous talk with no divisions, give headings and points, you, as well as the student, can follow it much better Cut the regular course 10, 20, 30 per cent in time If the one hour period be deemed the best length for lectures, reduce the number Dividing the session into at least two terms will aid in this With the whole session as a term it is very easy to extend through it a course of lectures that really could be given in considerably less time The shorter term will help condense the work I am not one of those who believe that didactic teaching should be entirely eliminated Lectures permit giving to an entire class systematic instruction that cannot as well be given in laboratory or ward But much can be done toward lessening the time devoted to them

3 SAVE TIME BY MORE INTIMATE CORRELATION OF DEPARTMENTS

This means real teamwork To institute it, the members of the faculty and their first assistants should meet and arrange in exact detail the subjects and parts of subjects each department is to handle For instance, that portean subject inflammation is discussed in some of its phases by every department, and necessarily so But only one department should deal with the general pathology of inflammation as a tissue process That department is pathology, because it has the gross and microscopic material with which to demonstrate the tissue changes Then the surgeon and gynecologist and obstetrician and others should not take up these points Let them deal with the symptoms and diagnosis and treatment of inflammation of the organ they are discussing Let them tell what to do with abscess of the lung or liver or pelvis, but leave out the description of *an abscess* In the same way the pathologist describes types of inflammation of mucous membranes, the clinician shows cases of these, gives symptoms and treatment, but does not take up half his hour describing catarrhal or diphtheritic or hemorrhagic inflammation as such Repetition is admittedly the way in which one learns, but the length of the medical course does not permit of several departments giving the same subject

In the same way a course on surgical anatomy, if it be given, should not spend most of the time with details of descriptive anatomy, problems of the surgeon are to be uppermost Diseases of the blood are to be handled by the medical or pathologic department, not by both How much of the subject of syphilis is considered by the genito urinary department, the pathologic department and the lecturer on etiology? Many similar problems will present themselves in the conferences mentioned Time can be saved if they are adjusted with the knowledge and consent of those concerned If left to the dean or the curriculum committee, satisfactory results will not be secured

But, says some one, I must go over this work that belongs to another department because there it has not properly been taught This sometimes is too true but it is very easy to overdo this accusation Such a spirit engenders sarcastic ideas and references to other departments and interferes with good teaching It is so easy for the morbid anatomist or histologist to intimate gently but firmly that he has to spend much time making good the deficient instruction in the anatomic department And the staff in clinical medicine and surgery and obstetrics bemoan that pathology has not been properly taught And the pathologist waxes sarcastic over mistaken diagnoses by clinicians

As a help along this line, I believe that these conferences to divide subjects can well discuss methods of teaching and their results as viewed by other departments Let the various branches compare notes and the teachers say to each other in a friendly spirit what they have been saying to others in sarcasm or hurtful criticism Determine what is needed from each to give students a well balanced course and then each do his part Each should be willing to give up teaching hobbies if these do not fit in the general scheme or are not conducive to real teamwork Finally, if there is a department that really is not doing its work properly or will not cooperate with the others, these conferences will show this and the governing board can act accordingly

In connection with these teachers' meetings it should be noted that I suggested the inclusion of first assistants (whatever their title) not only because they spend much more time with the students than do the heads of departments (in other words do most of the teaching) but also because they get more of the student's point of view The student dare not approach the professor with his difficulties, but he feels fairly free to unburden himself to assistants And I am speaking not only for the student body but also for the teachers when I say that the ideas and suggestions of the former are not to be disregarded They are young men many of them well along in the twenties, and not a few of them have previously taught school And every one knows whether the teacher whether professor or instructor is presenting his subject in a way that can be understood They are not to be asked to prepare the curriculum or to decide just how subjects are to be taught, but their comments on the effectiveness of teaching methods are most valuable I have learned much from students

CONCLUSIONS

The medical curriculum is now overcrowded and still other subjects in modern medicine are waiting to be added

The demand for increased hours for subjects now on the schedule especially laboratory branches is making worse instead of relieving this condition

In this article are offered suggestions for practical relief by lessening the number of hours given to each subject except the actual study of patients

The principle advanced is that of applying efficient methods to teaching with the idea of

same knowledge in less time In laboratories, condense to essentials, in lectures, give systematized fundamentals without aiming at entirety, between departments, secure real teamwork

The medical school that effectually utilizes this principle will be blessed by its students and honored wherever its graduates may serve

THE DIAGNOSIS OF HUMAN PLAGUE

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Much has been written on the diagnosis of bubonic plague in rats and other rodents, but very little has appeared, in this country at least, concerning the disease as it appears in man Diagnosis is a matter of much more than academic interest, particularly to physicians resident in our seaports, for it is the prediction that it is only a matter of time when this disease will appear in many if not all of the seaports of the United States When infection does occur, the first observed manifestation will be a human case, and for the diagnosis of this dependence must primarily be placed in the practicing physician

The early discovery of the occurrence of plague infection in a community is of supreme importance In the United States, methods of control have been developed which can with certainty be depended on to limit and eradicate plague infection If the infection is discovered early, control measures can prevent hundreds of human cases and can almost at once eliminate the danger of spread to other cities, hence it certainly behooves us to be acquainted with at least the principal clinical signs and symptoms

Unfortunately, textbooks give little attention to plague, and their descriptions of the disease are usually generalizations without outstanding points that may stay in the reader's memory There are good descriptions of plague in the literature, but mostly these are in books on tropical medicine, too seldom studied by the average physician For a more extended description than is given herein, the reader is referred to Stitt's[1] "Diagnostics and Treatment of Tropical Diseases" Since my intention is to emphasize the "high points" of plague, no lengthy or very detailed description is being attempted

TYPES OF THE DISEASE

Plague occurs in four forms, only one of which far exceeds the others in importance They are, in order of frequency and importance to the American physician, bubonic, pestis minor, septicemia and pneumonic Of these, bubonic is far and away the most important to us, since it is the type that is most likely to occur in this country Recently there has been a small outbreak of pneumonic plague in one of our western cities, and it is realized that should another such outbreak occur and get beyond control, a fearful epidemic might ensue, but the chances of this are regarded, on good grounds, as remote compared with those of bubonic cases making their appearance

Bubonic Plague—There are three principal symptoms of this type of plague, and one clinical sign, surely a small array to remember The symptoms are sudden onset, rise of temperature and marked prostration The sign is the bubo The onset is usually quite sudden, the patient feeling well in the morning, say, and very sick before the end of the day At onset frequently appears mental haziness and disordered motor coordination resembling similar conditions in some stages of alcoholic intoxication A chill is quite common The temperature varies from 100 to 106 F, with 102 as the average Prostration is as marked as in severe influenza, or more so, on the fourth or fifth day of the disease the patient is apt to be semicomatose and limp as a bag of meal These signs may vary in degree, cases sometimes being seen which merge into pestis minor The usual picture is that of a very sick man with temperature of 102 or thereabouts, who complains of a bubo Minor symptoms are full but rapid and compressible pulse, injected conjunctivae and flushed skin The important point is the association of these symptoms with a bubo The plague bubo is characteristic

The bubo, nine times out of ten, is femoral and virtually always on one side only Occasionally axillary buboes occur due to infection through flea bites on the hand or forearm, and very rarely the glands of the neck are the ones affected Since, however, the rat flea usually bites man on the lower portion of the leg, we find that scarpa's triangle on one leg or the other *is the site of election* It *is not to be inferred* from this that the inguinal glands above the bubo are normal—far from it, as a rule, but usually a glance is enough to determine that the main mass is below Poupart's ligament, though a lesser swelling frequently appears above it

The bubo has four main characteristics It appears coincidentally (approximately) with the onset of the disease, the swelling is caused by infiltration of the tissues with fluid at least as much as if not more than by enlargement of the glands, the skin immediately over the bubo is hot and red, and the mass is exceedingly tender and painful to the touch The bubo is an entity not a string of enlarged glands, but a mass of acutely engorged necrotic glands embedded in gelatinous inflammatory tissue It appears suddenly and does not suppurate until a week or two after the onset, if at all Unlike venereal buboes, it shows a broad, flat surface, seldom coming to a point When seen within the first three or four days, the individual large glands can be made out, thereafter the infiltrated tissue toughens and only a large hard mass is palpable

Minor signs are palpable spleen, large liver and occasionally the presence of a blister or 'phlyctenule" on the extremity carrying the bubo The last occurs only in about 5 per cent of cases, but should always be searched for because, if found, it renders diagnosis exceedingly easy, smears from the contents revealing the typical *B pestis* in tremendous numbers These phlyctenules resemble blisters with turbid contents, they vary from one-half inch to an inch and a half in diameter

Pestis Minor—Pestis minor is the mild form of bubonic plague It differs from the description above in lacking a sudden onset and prostration, fever is usually present for two or three days, with general malaise The bubo is quite characteristic, but is likely to develop more slowly These cases are usually seen late, when the bubo is hard and only moderately tender The patients usually recover, the bubo being slowly absorbed, occasionally suppurating Cases in which

1 Stitt E R The Diagnostics and Treatment of Tropical Diseases Ed 3 Philadelphia P Blakiston's Son & Co 1919

the patients do not recover pass into the more severe type

Septicemic Plague.—This is the type in which there is an overwhelming infection of the blood, with death in three or four days, without the appearance of buboes. It need not be considered at any length here, for the reason that its diagnosis without previous knowledge of the existence of plague in the community is hardly to be expected. All that the physician sees is a patient who has suddenly been taken very ill, and who dies without showing any definite evidence of what ails him. At necropsy it can be diagnosed definitely if smears and guinea-pig inoculations are made from liver and spleen.

Pneumonic Plague.—In pneumonic plague, we have a relatively rare form of the disease which, however, being directly contagious, is highly apt to become epidemic when it does appear and with disastrous results. It is unlikely to occur in the Southern cities, but from San Francisco and Norfolk on the two coasts North it must be borne in mind as a possible menace.

Primary pneumonic cases seldom occur in warm climates, since for direct droplet infection of the respiratory passages it has been definitely shown that conditions preventing even moderately rapid drying are necessary. For example, the great epidemic of pneumonic plague in Manchuria was associated with tightly closed native homes and a severely cold winter, while in India where pneumonic involvement from axillary buboes is not uncommon, primary pneumonic infection of attendants on such cases is rare.

Plague pneumonia differs from other forms of pneumonia on three points. After sudden onset, the patient is extremely prostrated with almost no chest signs, by the time definite involvement of the lungs is demonstrable, the patient dies. The sputum is watery, never thick and tenacious, and soon becomes very bloody, the sputum contains typical *B. pestis* in large numbers. Pneumonic involvement occasionally supervenes in bubonic cases.

DIAGNOSIS

Plague is one of the few diseases which can be absolutely diagnosed by the bacteriologic findings. Any case still showing well marked signs or symptoms can be positively shown either to be plague or not plague by proper laboratory methods. *Bacillus pestis* can always be found, if it is present.

Procedures for Recovery of the Organisms.—In bubonic plague and pestis minor, the organism is obtained by inserting the needle (18 or 20 gage) of a syringe into the bubo, going into a gland, if palpable, and aspirating some of the gland juice. One or two drops is usually all that can be aspirated, but this amount is quite sufficient. Most of this is used to make smears, after preparation of which 1 or 2 c.c. of salt solution, or just water, are drawn into the syringe, shaken up a bit and portions of it injected subcutaneously or intraperitoneally into two guinea-pigs. In 90 per cent of cases of plague the characteristic bipolar bacilli will appear in the smears, in 99 per cent of cases, one or both of the guinea-pigs will die within ten days, showing the characteristic injection, bubo, large liver and large, granular spleen with the bacilli present in great number in smears. Intraperitoneal injection causes earlier death of the guinea-pigs, but without the appearance of bubo or markedly granular spleen. It has the advantage of speed and the appearance in the peritoneal exudate of a practically pure culture of *B. pestis*.

In suspected septicemic plague 3 or 4 c.c. of blood is drawn, thick smears made and guinea-pigs inoculated. In only a few of these cases will the smears be positive, but the guinea-pigs are quite reliable, having been proved susceptible to as few as three or four bacilli.

In pneumonic plague *B. pestis* is present in ever increasing numbers in the sputum. Guinea-pigs should be inoculated for production of the characteristic lesions in all cases since the microscopic appearance, except to the eye of an experienced observer, is not a reliable guide.

In preparing smears they should be made reasonably thin. After drying in air they should be fixed by passing once or twice through a flame and then stained with carbolthionin, carbolfuchsin or Loeffler methylene blue, preferably the former when obtainable since it brings out best the bipolar staining. The plague organism is a relatively short, thick rounded end or oval bacillus. When it is present in smears from tissues at all it usually occurs in considerable numbers, a diagnosis should never be based on two or three bacilli. Smears showing *B. pestis* have three principal characteristics. The bacilli are lightly stained and a considerable proportion of them show distinctly heavier staining at the two ends shading down to the central portion, which is almost completely clear (the proportion of bipolar stained individuals varies very much in different smears but is almost never 100 per cent). The individuals vary markedly in size from short coccobacillary and round coccoid forms to rods two or three times as long as wide with all intervening sizes. There is no particular arrangement, chains are not formed, and individuals do not lie parallel. In smears from human buboes it is not unusual to find plague bacilli inside of phagocytes.

When any case suspected of plague infection has progressed to the point of finding what are believed to be specific organisms or suspicious lesions in guinea-pigs it should be reported to the proper health authorities as a suspicious case, the absolute determination of the specificity of the organism, which is a somewhat complicated procedure, being placed in the hands of a competent bacteriologist.

POSTMORTEM APPEARANCE

The postmortem appearance of human cases differs somewhat in the various types, except that in the bubo and hemorrhagic pneumonia there are no very marked gross lesions. The bubo cannot be 'shelled out," but must be dissected out. On section it shows the large hemorrhagic necrotic or caseous glands embedded in a mass of blood-stained more or less gelatinous inflammatory tissue. Only the glands themselves are necrotic. The viscera show marked enlargement and congestion of the spleen and liver. Smears from spleen liver and bubo show *B. pestis* usually in profusion. In plague pneumonia large areas of hemorrhagic necrotic consolidation of the lungs appear with plague bacilli in great numbers. Guinea-pigs should always be inoculated for confirmation.

In closing it is proper to emphasize the statement at the opening of this paper that the probability of plague eventually appearing at our seaport cities makes the diagnosis of human cases a matter of highly practical importance and not academic interest.

535 St. Charles Street

CLINICAL MANIFESTATIONS OF INFECTION OF THE LATERAL SINUS*

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Infection of the lateral sinus we submit as a comprehensive term covering the subdivisions usually spoken of as phlebitis, sinus thrombosis and septicemia The object of this paper is to differentiate these types, if possible, more clearly, in order that it may be shown that the diagnosis is often exceedingly difficult, even when the facilities of a large hospital are at hand, that the dangerous types may not have thrombosis, and that the cases in which the operative findings disclose complete blocking of the sinus extending back to the torcular have developed more slowly and are the least dangerous Although this subject is one that has been discussed many times, yet no one will deny that many cases are still being overlooked This is particularly true in children and in adults when the symptoms are atypical It is probably true in the past that we have attempted to define too specifically the clinical picture of a complication resulting in infection of the lateral sinus in which the specific organism varies, and where no account is taken of the amount of toxins thrown into the circulation, whether it has been gradual or sudden or of the resistance of the host This complication is not then a disease entity resulting from a specific infective organism, but must vary in its clinical manifestations with almost every case Instead of a so-called typical picture with a chill, a sudden rise of temperature of 104 to 106 F , followed by a subnormal remission and sweating, there may be no chill, no temperature over 100, no subnormal remission or sweating, about the only thing common to all being an increased leukocytosis If the blood stream has been invaded to any appreciable extent there must be an increased leukocytosis The three cases here reported show three distinct types with temperature charts bearing no resemblance to each other, and yet it was necessary to ligate the jugular in all

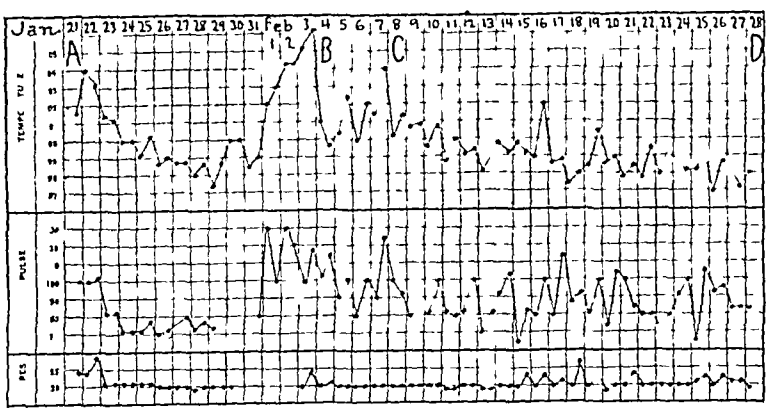

Chart 1 —Temperature pulse and respiration in the case of P B *A* mastoid operation at Infirmary *B* secondary mastoid operation and ligation of jugular *C* white blood cells 17,400 *D*, discharged

PATHOLOGY

The operative findings in mastoiditis in which the sinus is exposed give us no certain evidence as to the present or probable development of a thrombus in the lateral sinus or of the blood stream being invaded We may have a perisinus abscess with the lateral sinus uncovered The sinus wall may not appear normal in color, and may or may not be covered with granulations There may be undoubted resistance to the touch from thickening of the wall, and yet no infection of the blood stream has resulted On the other hand, there may be left a thick and healthy looking plate of bone over the sinus with infection already present The exposed sinus, thickened wall, or change in color are only suggestive, although the first stage, especially when a thrombus is found, is usually a phlebitis involving the thickness of the vessel wall and resulting in roughening of the intima While this in most cases is secondary to a suppurative otitis media and mastoiditis, one case was recently reported by Mosher in which the infection was an extension from a peritonsillar abscess Other cases have been reported as secondary to a labyrinthitis, and in many the blood is the avenue through which the infection reaches the sinus Again, at the time of the mastoid operation, if this has been performed during the congestive stage before the bone inflammation has been walled off by leukocytes, the operator may fail to remove all infected cells These cells about the sinus may later break down, and three or four weeks after the original operation there may suddenly develop symptoms of sinus infection

This is shown in the case of P B (Chart 1); seen in consultation Feb 3, 1920 Eleven days after the primary mastoid operation following influenza, the temperature suddenly rose to 105, with a remission to 99 4 The boy was distinctly toxic, mentally clear with a leukocytosis of 22,000 and 92 per cent polymorphonuclears His reflexes were within normal limits and there was no papillitis The mastoid cavity was filling in with rather flabby granulations There was tenderness over the emissary vein, with slight edema The next day the mastoid was reoperated and the jugular ligated Much soft bone was found at the tip and around the sinus, when the sinus was opened there was a gush of blood but no thrombus The toxemia was in evidence clinically over a longer period than usual on account of the poor resistance of the patient His recovery was uneventful

While the sinus infection may not be present at the time of the mastoid operation, if the sinus has been exposed, more bone should be removed and the edges made smooth in case it needs to be opened later In the preinfective stage, if the invasion of the sinus has been slow and the infecting organism of low virulence, the resulting thrombus is likely to be large and even extend to the torcular

In the case of A M G (Chart 2), the ligation was performed one month after the primary mastoid operation In the interval the patient had had an attack of whooping cough At the end of three weeks the patient commenced to cry bitterly for ten minutes after coughing grasping her head with her hands Before this she was very quiet There was no discharge from the middle ear, and the mastoid was healed, except for a small pustule over the tip There was an increasing leukocytosis which reached 26 000 There were no focal symptoms Physical examination by a pediatrician was negative The temperature was coming down, but the pain on coughing remained and the leukocytosis was increasing It was thought best to explore The mastoid was reopened The aditus was found shut off, and the mastoid

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cavity in the region of the antrum was healed There was soft bone around the sinus, however, and the sinus wall was found thickened and covered with granulations After ligation of the jugular, when the sinus wall was incised, there was found a thrombus that extended back so far that no attempt was made to remove it A section of the sinus wall was removed and the usual packing applied Recovery was uneventful

These patients often undoubtedly recover without the condition being recognized On the other hand, if a large amount of infective material of high virulence is suddenly thrown into the circulation, there may not be any thrombus found on opening the sinus The incision of the sinus wall will be followed by a sudden gush of blood flooding the entire field, unless controlled by pressure These are the cases in which ligation is urgent, for we now have a septicemia which will be followed by metastases if the general circulation is not shut off

SYMPTOMS

Local—The most constant in my experience has been edema and tenderness over the emissary vein This, however, is only suggestive, for it is present in perisinus abscess and in some cases of mastoditis When the primary periostitis over the cortex has subsided and is followed by edema and tenderness over the emissary vein as a later development, we expect that there is active trouble around the sinus Of less importance, because more rare, is tenderness over the upper part of the jugular vein I have seen it only a few times

General—One of the important symptoms is fever, which may be typical if the patient is markedly septic, but is never typical if the infection is mild but depends on the amount of toxemia In the severe cases we have a chill, temperature from 103 to 106, subnormal remission and sweating, i e, a septic temperature With this temperature there is marked leukocytosis and high polymorphonuclear percentage, and the diagnosis is very easy Here Charts 3 and 4, of P S, are of interest as being typical of a case with pronounced sepsis having the wide excursions between 95 2 and 106 It is also interesting from the age of the patient, as it occurred in a child 13 months old

The baby had an acute infection Aug 1 1919, with several reinfections and finally a general bronchitis August 19 the temperature had fallen to 98 a m and 100 p m August 21 there was a double acute otitis media, temperature 105, double paracentesis within twelve hours August 22, free discharge August 23 11 a m, chill, temperature 105 with remission to 96 4 and marked prostration August 24 4 p m temperature 106 and another chill, ears discharging freely On this date I saw the patient in consultation August 26, the temperature was from 105 6 to 106, pulse 150 respiration, 60, white count 24 000 polymorphonuclears 70 per cent There was no postaural swelling or tenderness, and no sagging of the posterior superior wall The left ear looked like any middle ear with acute infection The right membrana tympani was boggy and we assumed that the trouble was on this side The next day a mastoid operation with ligation of the jugular was done There was a well developed tip cell and antrum with surrounding cells When the sinus was opened the blood flowed sluggishly and then more rapidly no clearly defined clot having had time to form Recovery was uneventful

On the other hand, following the mastoid operation, the temperature, instead of dropping after one initial rise, may be continuos ranging from 99 5 to 102, and extending over weeks Between these extremes there may be any type (as in A M G) Infection of the sinus is one of the most common complications of mastoiditis and should always be suspected Many cases with meningeal symptoms due to a bacteremia from an infected sinus, cannot be differentiated from actual meningitis

The case of E F P soldier seen at Camp Lee, is reported in full because of the complete data even to the testing out of the virulence of the specific organism We believe that the ligation of the jugular and the repeated drawing off of cerebrospinal fluid were the important factors in his recovery Unfortunately, for scientific purposes, he was given some antistreptococcus serum He had already commenced to improve, but the order for the serum, which had been given two days before, had not been withdrawn, and so it was used

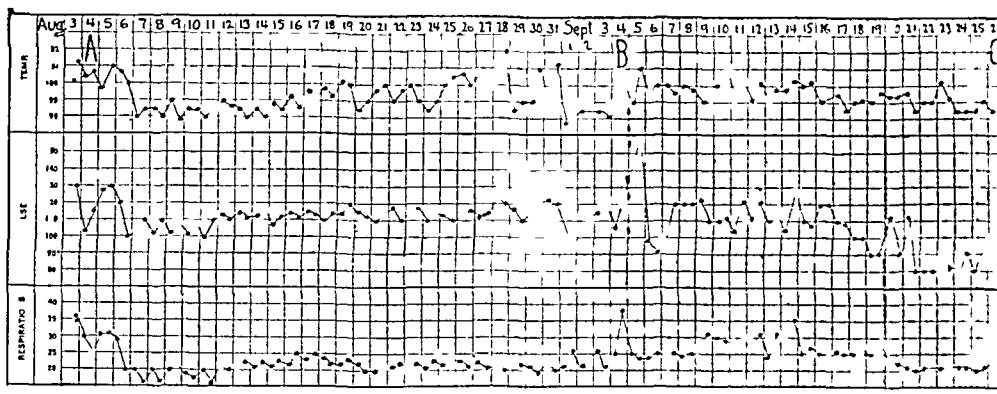

Chart 2—Temperature pulse and respiration in the case of A M G *A* mastoid operation *B* ligation of jugular *C* discharged

E F P private Co K Sixty-Second Infantry, bricklayer whose family history was negative, had had the usual diseases of childhood but no other illness except a right acute otitis media when 16 years of age lasting three days The patient was admitted to the base hospital at Camp Lee Va, Dec 4 1918 complaining of sore throat which had existed for four days previous to admission He had pain in the right ear which started discharging Dec 3, 1918 Examination of the throat revealed bilateral acute follicular tonsillitis *Streptococcus hemolyticus* was obtained on culture The patient complained of slight pain over the right mastoid region A profuse mucopurulent discharge continued to December 7 when it became less marked remaining about the same until December 20 when the membrana tympani was incised a profuse discharge following

December 23 the temperature was 102 respiration 24 pulse from 116 to 120 At this time the patient developed an acute exacerbation of a subsiding tonsillitis with some pain in the mastoid region and tenderness on pressure

During the night of December 27 28 the patient vomited During December 28 29 he became drowsy had a chill There was marked stiffness the back Kernig's sign was positive.

December 29, the patient was somewhat drowsy, he had vomited three times in the last forty-eight hours There was no mastoid tenderness or edema The inner end of the right auditory canal was considerably narrowed and there was some drooping of the superior canal wall The temperature was 103 at noon The first lumbar puncture was performed The fluid was under pressure and was cloudy Culture revealed the presence of hemolytic streptococcus A culture from the middle ear revealed the same organism

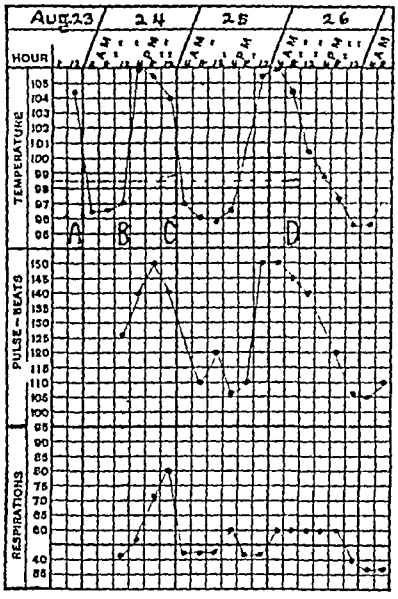

Chart 3 —Four hour chart in the case of P S *A* chill *B* white blood cells 27 000 *C* chill *D* white blood cells 34 000 poly morphonuclear leukocytes 70 per cent

A simple right mastoidectomy was performed The cells were broken down and the cavity was filled with pus under pressure The area of the lateral sinuses was exposed by disease and covered with granulations A small area of the dura over the antrum was exposed by the disease All necrotic bone was removed

December 30 the patient was very restless, with twitching of the face muscles and beginning papillitis of the right eye An inoculated mouse died in four hours As the lateral sinus was exposed and covered with granulations, and as hemolytic streptococci were found in the spinal fluid and isolated from the ear, it seemed advisable to ligate the internal jugular vein, which was done Lumbar puncture revealed 680 mononuclear cells 80 per cent polymorphonuclears There were faint traces of globulation No meningococci were found

Dec 31, 1918, 25 c c of cloudy fluid was withdrawn from the spinal canal revealing 390 cells, 70 per cent polymorphonuclears, smear negative Jan 1, 1919 the fourth lumbar puncture was performed 35 c c of fluid being withdrawn It was clearer than on the previous day, and showed 320 cells, negative smear, and no growth on culture Twenty-five c c of antistreptococcus serum was given intraspinally At 8 p m, 25 per cent glucose solution was given intravenously The patient was restless and delirious, the condition was not very good

January 2, he developed erysipelas on the right side of the face and neck The fifth lumbar puncture was performed Fifty c c of practically clear fluid was withdrawn, and 25 c c of antistreptococcus serum injected, 200 cells, smear negative At 3 p m, 25 per cent glucose solution 550 c c, was given intravenously over a period of one and one-half hours

January 3, the sixth lumbar puncture was performed Seventy-five c c of clear fluid was obtained, and 25 c c of antistreptococcus serum was injected, 300 cells, smear, negative At 10 30 a m, 550 c c of 25 per cent glucose solution was given intravenously over a period of one and one-half hours The general condition was very much improved

January 4, at the seventh lumbar puncture, 35 c c of fluid was withdrawn, 20 c c of antistreptococcus serum was injected, cell count, 250, polymorphonuclears, 78 per cent, smear, negative The general condition was improved, the patient took nourishment well and did not complain The erysipelas was improved The dressing was changed, there was considerable pus from the neck wound, but no discharge from the middle ear

January 5 examination revealed normal eyegrounds About this time some swelling of the right temporal region was noticed with some brawniness of the tissue

January 10, the condition was very good, the ear dry, the mastoid wound clean, with very much less discharge from the neck wound, and the patient was allowed out of bed for two hours The swelling over the temporal region was increasing and the patient complained of headache This *condition increased in severity up to January 25, when* it was decided to open wound to see whether or not there was any pus in the temporal region Operation revealed zygomatic vertical perforation and a large epidural abscess, about 3 drams of pus was obtained January 2, the white cell count was 15,300, January 3, 17 100, January 6, 17,600 From this time on the patient made an uneventful recovery The mastoid wound was clean and in good condition The general condition was very good

In this case there were present mental dulness, positive Kernig's sign, stiff neck, papillitis, turbid cerebrospinal fluid, bacteremia, virulent organisms that killed a mouse in four hours, and yet the patient recovered after ligation of the jugular, and repeated withdrawal of cerebrospinal fluid

When symptoms of meningitis follow mastoiditis, however stormy their character, the jugular should be tied at once Sinus infection is often diagnosed by exclusion If a mastoid operation turns out badly and an exploratory secondary operation reveals nothing wrong in the technic of the primary operation, in the presence of a marked leukocytosis the jugular should be tied, if there are no definite indications of other complications With a septic patient it is safer *to explore than to wait and see what will happen* Every year patients die of meningitis and no attempt is made to ascertain the condition of the sinus Many of these lives, I believe, could have been saved by prompt ligation of the jugular

OPERATION

The jugular, having been exposed by an incision parallel to the anterior border of the sternomastoid and on a level with the thyroid cartilage, is ligated in two places and dropped back into its bed The superficial fascia is brought together by two or three interrupted sutures Lastly, the skin is brought together by a continuous suture and a collodion dressing applied to prevent infection from above With a fresh toilet and a change of gown and gloves, the operator now blocks off and incises the sinus which was widely exposed at the mastoid operation If a thrombus is present and is circumscribed so as to be removed readily, there is no surgical contraindication On the other hand, if the thrombus is so extensive that there is danger of pushing infected material farther on, I feel that it is better judgment to remove a section of the sinus wall and let the thrombus remain It seems faulty technic to remove a clot that is acting as a protection and then block the sinus and have another form that may not be so

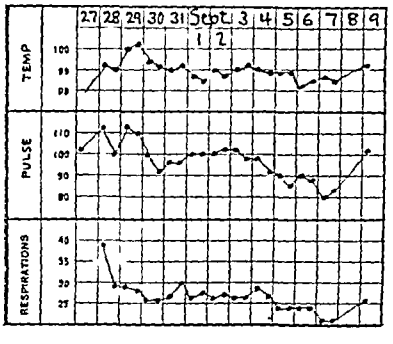

Chart 4 —Temperature pulse and respiration in the case of P S

safe If a clot is not present, iodoform wick is packed down on each side of the sinus wall and then on top, and kept distinct from the general packing of the mastoid cavity for the reason that the sinus packing should not be disturbed for eight or nine days and should then be removed very gradually The mastoid dressing will usually be changed on the fourth or fifth day

CONCLUSIONS

1 Sinus infection should be used as a comprehensive term covering three subdivisions phlebitis, thrombosis and septicemia

2 The symptoms vary with the infecting organism, the avenue of invasion, stage of the complication and resistance of the host

3 The diagnosis can be made only by a study of the history, local conditions and blood findings

4 There is no typical picture

5 In septic cases with bacteremia, all the symptoms of meningitis may be present

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ABSTRACT OF DISCUSSION

DR CULLEN F WELTY, San Francisco I saw four cases without any symptoms whatever in which complete obstruction of the sinus was discovered at operation I think many cases of sinus thrombosis are not detected These cases were found accidentally, in two, the sinus was full of pus, in the other two, an infected thrombus was present

As I understand it, Dr Emerson ligates the jugular in every case I think it is a nice point to decide when to ligate and when not to ligate the jugular In some instances ligation is not necessary and in others it is quite important The invasion of the sinus does not begin as a clot infecting the whole sinus There is a small invasion or a deposit on the inside of the vessel, which is called a mural clot, that only partially obstructs the vessel and as it increases in size complete obstruction occurs I maintain that in this mural clot (which the Doctor did not find) he had an infected sinus just the same, but in this particular case you do not need to ligate the jugular Furthermore, if the jugular is ligated it is bad surgery to drop the ligated vessel back into the wound and cover it up because there is a piece of the thrombus within the ligated and covered up vessel or an infection of the vessel wall In getting rid of infection we must do all we can to get rid of every possible bit of that clot When the jugular is ligated go down until bleeding from the petrosals occurs if possible Sometimes the petrosals are likewise thrombosed Then go to the distal end and remove the bone until a healthy sinus is in view then curet the sinus until free bleeding occurs I do not think it good judgment to put a tampon into a sinus that does not bleed freely The cases that have not had a speedy convalescence have been those in which I could not get free bleeding from the posterior wound

DR JOHN F BARNHILL Indianapolis The internist often sees these patients first and does not always recognize them until too late It is the experience of many that if these patients are seen early by the otologist and operated on a vast majority of them will get well, whereas formerly when classical symptoms were awaited most of them died Dr Ewing W Day, of Pittsburgh reported six cases of sinus thrombosis without any fever or little fever and now Dr Welty reports four cases without fever Such reports serve as a warning always to be on guard I never have seen a case of this type, but possibly I may have overlooked some cases that were thus atypical Diagnosis is most important and these reports of cases lead us to believe that there are several types of sinus thrombosis and that therefore we should be on the lookout for some type in almost every case of aural discharge I have never seen a case of lateral sinus thrombosis with temperature so low as Dr Emerson has stated in two cases the temperature did not exceed 101 F We should bear such possibilities in mind

I have seen four cases such with no symptoms whatever except a continued temperature of septic type In three of the four cases there were no aural symptoms and no history of ear disease, except that there had previously occurred a discharge that had not continued longer than twenty-four hours Concerning the question of dropping the stump back into the wound I have always followed that plan, and have never seen any ill results

DR LEE W DEAN Iowa City In my judgment in every case where it is necessary to ligate the internal jugular the gutta-percha drain should be left at the lower end of the wound

DR H H MARTIN Savannah Ga A boy of 20 who had had chronic otitis from the first year of his life following scarlet fever had a large granuloma in the ear filling the external canal His only complaint was frontal headache I sent him to the hospital to have the granuloma removed and incidentally had a blood count made which showed 28 000 leukocytes The next morning he awoke complaining of a chilly feeling When I saw him at noon he seemed to be all right I did a simple mastoid operation with removal of the granuloma I found no pus in the mastoid, but deep down a necrotic groove leading to the tip Immediate improvement followed the operation the leukocyte count dropping to 8 800 About two or three weeks afterward however the symptoms had become just about as they were in the beginning the patient also complained of pain in the back of his neck The leukocyte count was 20 000 I came to the conclusion that I had probably not uncovered the focus of infection in the mastoid and reopened the wound and removed the posterior canal wall He again improved for a few days but complained intermittently of pain in the back of his neck and his leukocyte count remained high Eventually we opened the sinus and found a nonseptic clot a thrombus that was white and shriveled Cultures revealed no pathogenic organism The temperature never was higher than 101 5 F Later there developed clear evidence of cerebral abscess which was evacuated but without any result other than perhaps that the boy lived somewhat longer All the cases I have ever seen had choked disk which appeared about the fourth week Therefore it seems to me that the outstanding diagnostic points in lateral sinus thrombosis are frontal headache vomiting without nausea the presence of a high leukocytosis, pain in the back of the neck and choked disk

DR LEON E WHITE Boston We examine all cases roentgenographically as part of our routine Both mastoids are taken on the same plate so that comparison is easy In a recent case in which the question of involvement of the sinus was under discussion the roentgen ray was most helpful The involved sinus was very much larger and higher than the uninvolved sinus In two cases infection was not suspected until the mastoid was opened In many cases it is extremely difficult to determine the presence of a clot I have had cases in which the assistants declared there was thrombosis but on slitting the sinus there was the usual hemorrhage As to the question of ligating the jugular I feel that this should be done if there is infection enough in the sinus to warrant opening it It is wrong not to eliminate the possibility of its draining into the system If a patient has a high temperature and a high leukocyte count not otherwise explainable we do not dare delay operation Dr Emerson is very apropos in saying that meningitis and sinus thrombosis are hard to differentiate in the early stages Meningitis may be prevented by getting rid of the infection in the sinuses

In the different services at the infirmary there are various methods of handling the neck wound In my service we use metal clips and at the lower angle of the wound we insert a small piece of silkworm gut which is removed in from twenty four to forty-eight hour

DR. FRANCIS P EMERSON Boston Some of the questions that have arisen in regard to my paper I think are due to the fact that I tried as far as possible to keep strictly to the subject and so I went over the operative technic very hurriedly

One case which I reported, in which the temperature was 102 F and then dropped to normal, I think probably would have terminated in recovery without operation But in the presence of elevation of temperature and an increasing leukocytosis, the only safe course is to shut off the general circulation from the infection I do not cut the jugular after ligating it I ligate in two places and drop the entire vein back into the neck The rest of my procedure is almost identical with that which Dr Dean mentioned

MIGRAINE THERAPY

BERNARD FANTUS, M S, M D
Associate Professor of Therapeutics Rush Medical College
CHICAGO

Some years ago, I came across the recommendation by T Lauder Brunton of a mixture of sodium salicylate, 1 gram, and potassium bromid, 2 grams, for the relief of attacks of migraine, which was couched in terms of such enthusiasm[1] that I was led to employ it in suitable cases, and my success with this combination has been such that I have not as yet had the courage to experiment with modifications of the formula

It is essential that the dose be given at the earliest possible moment when the headache is approaching, best, indeed, that it be given before it sets in by taking advantage of the signs by means of which these patients know that they will have a headache In some it is a peculiar nervous irritability at bedtime, in which case the dose should be taken before the patient goes to sleep In other cases, the patient awakens in the morning very drowsy and disinclined to rise, and perhaps with a feeling of weight in the head If he now goes to sleep again, he wakes up with his headache If, at the time when he first wakes up, he takes a dose of the medicine, the headache may be prevented Whatever other "aurae" the patient may have, such as scotomas or fortification phenomena, should be seized on to introduce the dose into the system before emesis takes place, as the presence of vomiting makes the retention of the dose rather difficult I have the impression that imparting effervescence to the medicine favors its efficiency and retention If the whole dose is vomited up, the patient might be able to retain a quarter of it taken in a wineglassful of seltzer water every fifteen minutes If a single dose does not suffice to jugulate the headache, a further dose may be taken hourly, until phenomena of salicylism, such as ringing in the ears, compel discontinuance I have found it rarely necessary, however, to push the remedy to this point

Effervescence may, of course be secured by administration of the dose in seltzer water It is more practical, however, to prescribe the remedy in this form

	Gm or Cc
℞ Sodium salicylate	6|0
Potassium bromid	12|0
Sodium bicarbonate	12|0
Mix and divide into six blue powder papers	10|8
Tartaric acid	

Divide into six white powder papers
Label Mix contents of a white and a blue paper in half a glass of water Repeat dose hourly if required

For very nervous and presumably sensitive persons and for poorly nourished individuals, it is prudent to advise that half the dose be taken at first to see whether or not it might be sufficient In this manner, possibly disagreeable effects, due to idiosyncrasies, would be avoided

PROPHYLACTIC TREATMENT

Of course, the patient is also given a thorough physical examination, including a specialist's investigation of eye, ear, nose and throat, and roentgenoscopy of the teeth, and the attempt is made to eradicate or correct any physical defect found It is just as important to place the patient under optimal hygienic conditions This means the best hygiene for that particular individual an adundance of sleep, a sufficiency of physical exercise (walking) to balance the usual excess of nervous work, a diet that might take cognizance of the idiosyncrasies of the individual and the requirements of daily bowel evacuation, and, above all, the cultivation of equanimity

In some highly neurotic individuals, the prolonged administration of bromid, as in epilepsy, has been distinctly useful in lessening the frequency of the attacks

It may be that, in view of the alleged potency of suggestion in this condition, the confidence with which I prescribe this treatment, and the assertion I usually make that I have a special remedy which I am quite sure will help the patient, may endow it with greater power than it intrinsically possesses I also tell the patient that the prospects as to ultimate recovery are good, since, in the natural course of events, the tendency of these attacks will become less with advancing years I furthermore advise the patient to report whenever a tendency to frequent recurrence manifests itself In this case, the attempt to discover physical or hygienic defects is repeated, and another course of bromid is prescribed, or the dose of bromid that is being taken is increased

1 Brunton T L On the Use of Bromide of Potassium and Salicylate of Sodium in Headache in On Disorders of Assimilation Digestion etc New York the Macmillan Company 1901 p 320

Clinical Notes, Suggestions, and New Instruments

ANTHRAX FROM REMOVING HIDE FROM MULE

RALPH KING M D Olney Ill

W L and C L father and son, aged 46 and 21 years, respectively lost a mule by death, March 21, 1920 The animal had been sick nine or ten days with a bad swelling of the head and one front leg There were no sores or nasal discharge and the animal was apparently paralyzed before death About one hour after death the hide was removed and sold They stated that they found water under the skin Forty-eight hours later both were taken ill with chill and a temperature of 103 F A few hours later painful papules appeared on the left index and right middle finger of the father and the external canthus of the left eye and point of the chin of the son These lesions rapidly broke down into discharging ulcers with depressed gangrenous bases surrounded by an edematous induration March 31, they were admitted to the Olney Sanitarium with marked prostration A diagnosis of anthrax was made from the history and physical findings The organisms were later demonstrable in the discharges from the ulcers

The treatment consisted of 40 c c of antianthrax serum given to each in 20 c c doses intravenously at six hour intervals This was followed by a slight reaction Moist dressings of boric acid were applied to the eye, and 50 per cent alcohol to the chin and finger lesions They left the hospital in five days Their convalescence was slow likened by them as to "one that had typhoid' Scars are left at the site of the lesions with no other ill effects No other animals

on this farm or those of their neighbors have had a similar illness

On account of the prostration and the fact that ten days elapsed before their admission to the hospital, we consider their recovery remarkable

TORSION OF SPERMATIC CORD

PETER MARSHALL MURRAY M D WASHINGTON D C
Assistant Surgeon Freedmen s Ho pital

C P, a colored man aged 28 laborer, with negative family h story, who had had a mild case of gonorrhea five years before, with no complications, complained of pain in the paraumbilical region May 29, 1920 had slight nausea and vomited once This attack came on without any apparent cause Next day the pain had subsided except in the lower right iliac fossa, and the right testicle began to swell The testicle was not painful but was tender to the touch and enlarged gradually The patient continued to be comfortable, the pain subsided except on handling of the testicle As no improvement followed rest in bed, elevation, ice bag, etc for forty-eight hours, operation was performed There was a moderate amount of straw colored fluid in the tunica Vaginalis The spermatic cord was twisted inward two and one-half turns just proximal to the globus minor The testicle and epididymis were swollen, dark hemorrhagic, and almost gangrenous Orchidectomy was performed Recovery was prompt and uneventful the patient being up and able to leave the house within a week The symptoms in this case were very mild and after the first day the picture was certainly not one of strangulation

1645 New Jersey Avenue N W

Special Article

OBSEPVATIONS ON SOUTH AMERICA

II PERU

WILLIAM J MAYO, M D
ROCHESTER, MINN

General Gorgas freed the coast country from yellow fever, but the disease is still to be found in the sparsely inhabited back country, both in northern Peru and in Ecuador General Gorgas was engaged by the Peruvian government to continue the work of eradication, and it is hoped that yellow fever will soon be a thing of the past

In 1532, just forty years after Columbus discovered America, Pizarro with 310 soldiers landed in Peru and overturned the Empire of the Incas In 1535 he founded the city of Lima, which now has about 200,000 inhabitants On viewing the mummified remains of the 6-foot buccaneer lying in state in the cathedral, one visions the great mental and physical force of this man who subjugated Peru in nine years, from the time of his landing to his assassination

Peru is a vast country, half of it unmapped and scarcely explored Between the Andes and the Pacific lies a narrow strip of land on which there is no rainfall It has not rained in Lima for seventeen years, but the dust and general grime are forgotten in irrigated spots containing beautiful trees and flowers Lima is 2½ miles from the ocean, with its port at Callao, 8 miles away The Humboldt Antarctic Current, flowing along the west coast, keeps the climate pleasantly cool, but condenses the moisture in the air between the coast and the Andes and thus prevents rainfall The lack of water is painfully apparent in Peru and has much to do with sanitary failures which even the dryness cannot wholly overcome The country is tropical, and while the air is cool in the shade it is very oppressive on exercise or in the sun The noon siesta, a custom of the country, undoubtedly is based on human needs for it recuperates the body from the results of the heat on the tissues, especially the nerve tissues By dividing the day into two parts, the strain of the most trying hours in the climate of Peru and other tropical countries is reduced, and what might be called a protective neurasthenia, greatly resembling the neurasthenic state seen in the United States, is developed Certainly the siesta, a two hours' rest in bed after the noon meal with the removal of day clothing, is useful in the treatment of neurasthenia In the high valleys between the mountain ranges are fertile plateaus, the home of the Incas The Amazon River, rising in the Peruvian Andes, has a port at the city of Iquitos in Peru which harbors vessels of considerable size A railroad is being built connecting Iquitos with the Peruvian coastal plains

Peru has much to interest the medical sightseer All through South America the hospitals are of Spanish design, excellent for the tropics They are usually of one story, with high ceilings, large high windows, large porch effects for shade, and surrounded by fine gardens In Lima are two large charity hospitals The older, the Hospital de Santa Ana for women and children, boys up to 10 years of age, has a capacity of 300 beds A large new hospital is now being built to replace this old one, in which the government expects to install American nurses and American methods for caring for patients One of the greatest innovations will be the introduction of wire screens against flies Hospital Dos de Mayo for men was founded in commemoration of the victory over the Spanish fleet in Callao, May 2, 1866 The independence of Peru had, however, been declared in 1824 This hospital contains 700 beds and is more modern than the Santa Ana Hospital Miss Soper, a trained nurse from London, has been working courageously for four years to develop a nurses' training school and to improve the nursing and hospital conditions generally The results of her efforts are beginning to show

Several cases of verrugas, a disease of the skin peculiar to Peru, were seen in one of the wards of this hospital The disease is found in the higher Andes and is characterized by fever and eruption The cause is unknown, although it is believed to be the bite of a night insect Most patients recover, but there are fatal forms, when hemorrhages occur under the skin, forming pustules

Both the Hospital de Santa Ana and the Hospital Dos de Mayo are maintained, as indeed are all municipal charities, from the public charity fund, which is accumulated by private contributions and public amusements

The Italians, of whom there are many in Peru, maintain a good hospital, and the French also have a very good hospital of forty beds There are a number of private hospitals, notably Dr Febres, which is quite modern in its appointments Dr Graña's hospital with a capacity of 100 beds, now being built on the seashore about 3 miles from Lima, will be the last word in modern construction and equipment American nurses and a nurses' training school will be installed There are several excellent hospitals connected with Amer-

ican mines in Peru, with American physicians and nurses

Lima has 120 physicians, twenty of whom are surgeons The surgical technic is far in advance of hospital installation, and the highest praise should be accorded these men for their excellent work, which is further illustration of the fact that surgical results depend on the surgeon and not on his surroundings I attended many interesting clinics and saw Dr Gasañeta, Dr Aljovin, Dr Carvallo, Dr Denegri, Dr Morales, Dr Graña, and others doing clean, careful and skilful surgery Physicians qualified to do good roentgen-ray and cystoscopic work are needed in Lima

San Marcos University in Lima, the oldest in the Western Hemisphere, was founded in 1551 Señor Ngarteche Prado, president of the university, is a talented, gracious gentleman, fully equal to the duties devolving on him in the management of this great university, the only one in Peru, with its 4,500,000 inhabitants The university medical school is also in Lima and is the only one in Peru, it has about 300 students The spacious buildings are in beautiful grounds Dissecting material is ample The laboratories in charge of Dr Hercelles, professor of bacteriology and pathology, are excellent There are many unusual and beautifully preserved specimens in the museum of the medical school and in the laboratories The university impresses one as being in every way a real teaching institution

Primary school education, a course of six years, is compulsory in Peru, the secondary course of six years has a limited attendance The medical student must add to the two courses two years of science and seven years of medicine, making in all nineteen years of study to obtain a medical degree The exceptional student can reduce this period two years Medical students are much alike the world over, and one of their great virtues is their independent spirit, with little respect for tradition or authority To the medical student Thomas must be the greatest of apostles Our reception at the medical school by the faculty and the students was most impressive and formal In reply to some very beautiful eulogies of the United States, Dr M with characteristic felicity said that he wished to congratulate the students on the high character and professional attainments of the Faculty of Medicine There was no student applause He then said that he wished to congratulate the faculty on the extraordinary fine body of students they had to teach, and although these remarks were in English, the student applause was uproarious and long continued

The Peruvian Surgical Association, made up of men distinguished in the profession, have their headquarters in a fine building in Lima The visitor interested in medicine leaves Peru with profound respect for its medical profession

In the matter of industrial achievement, Peru is one of the most backward of the countries of South America, largely because of the lack of means of communication between the different parts of a country containing about 700,000 square miles of land broken up by great ranges of the Andes mountains The population, as represented by the upper classes, is refined, intelligent and progressive Their ideals are essentially those of North America, and they are developing along similar lines The lower classes are engaged in small agriculture, they are industrious, but, like children, are easily led by noisy political demonstrations

The bullfight still flourishes in the old ring at Lima, built nearly 200 years ago, but it is not very popular and will soon be abolished Several surgeons in Lima told me that they had never seen a bullfight The bullfight has its points of interest to those interested in comparative anatomy, and it requires skill and courage It is not, however, as exciting or as dangerous to the human participants as football, but, like our North American sports, it permits the multitude a great deal of vicarious exercise on the principle that it is much easier to allow some one else to undergo exertion than to take setting up exercises themselves There are no public lotteries or open gambling in Peru, but there is little attempt to control the liquor traffic

Besides the yellow fever, cases of a mild form of bubonic plague are frequently seen in the northern back country, many are "walking cases," and account for the virulent flare-ups which occasionally call public attention to the matter Such conditions are characteristic of all the countries

The United States is popular in Peru Without the protection of the United States it is probable that Peru would have a struggle to maintain her political integrity, the people of Peru are not warlike, in contradistinction to her more aggressive neighbors

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION W A PUCKNER, SECRETARY

STERILE SOLUTION OF LUTEIN-H W D—Each Cc contains the water soluble extractive of 0.2 Gm of Lutein-H W D, freed from protein in physiological solution of sodium chloride

Actions and Uses—See general article on Ovary, New and Nonofficial Remedies, 1920 p 201

Dosage—1 Cc daily intramuscularly It is claimed that the solution may be given intravenously with no reaction other than urticaria

Manufactured by Hynson Westcott and Dunning Baltimore No U S patent or trademark

Ampules Sterile Solution of Lutein H W D—Each ampule contains more than 1 Cc sterile solution of lutein H W D

Sterile solution of lutein H W D is made by extracting lutein H W D with a solvent composed of equal parts of alcohol and water The extract is freed from proteins by addition of lead acetate and subacetate After removal of the excess of lead the liquid is freed from alcohol and the concentration adjusted so that each Cc shall represent the soluble extractive of 0.2 Gm lutein H W D in physiological solution of sodium chloride

OVARIAN RESIDUE-H W D—The residue from the fresh ovaries of the hog after the ablation of the corpus luteum

Actions and Uses—Ovarian Residue is used for the same conditions as the entire ovarian substance but is claimed to have the advantage of being somewhat more stable in composition (see general article on Ovary, New and Nonofficial Remedies, 1920 p 201)

Dosage—From 0.3 to 0.6 Gm (5 to 10 grains) Supplied in the form of tablets only (see below)

Manufactured by Hynson Westcott & Dunning Baltimore No U S patent or trademark

Tablets Ovarian Residue H W D 5 grains—Each tablet contains ovarian residue H W D 5 grains

Ovarian Residue H W D is a grayish powder having a characteristic odor It is prepared from the entire fresh hog ovary by removal by mechanical means of the corpus luteum The residue is dried and powdered

MEDICAL EDUCATION IN THE UNITED STATES

ANNUAL PRESENTATION OF EDUCATIONAL DATA FOR 1920 BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

The tabulated statistics herewith presented are for the year ending June 30, 1920, and are based on reports received from the medical colleges or from other reliable sources We acknowledge here the splendid courtesy and cooperation of the officers of the colleges who have made the compilation of these complete statistics possible

STATISTICS OF COLLEGES

Table 1, on pages 380-382, gives the colleges in session during 1919-1920, the population of the city, the rating given to the college by the Council on Medical Education and Hospitals, the number of students, men and women, registered during the year, the number of 1920 graduates, men and women, the number of graduates holding collegiate degrees, the number of teachers for each college, the number of weeks of actual work in the college year, the total fees for each year, the executive officer of the college, and the dates of beginning and ending of the next session The figures in heavy-faced type show the totals by states Beginning on page 398 are given essential facts concerning all medical colleges arranged by states

HOME STATES OF MEDICAL STUDENTS

Table 2, on pages 384-385, shows from what state the students came who were in attendance at each medical college during the session of 1919-1920 The influence of the proximity of the medical school is seen in the fact that states having medical colleges contribute more students in proportion to the population than those which have no colleges This is shown by the dark zone of figures running diagonally down the page A comparison of this table with the large tables based on state board examinations,[1] which show the distribution of the alumni of each college, is interesting The college that has widely distributed alumni usually has a student body from an equally large number of states

The state furnishing the largest number of students this year was New York with 2,138 Illinois contributed 1,059 and Pennsylvania 1,038 The next states, in the order of the number of students contributed, are Massachusetts, 765, Ohio, 702, California, 519, Texas, 450, and Michigan, 435 Three states had less than 10 each, these being New Mexico, 9, Nevada, 5, and Wyoming, 5 There were 114 students from Hawaii, Porto Rico and the Philippine Islands, and 269 students from foreign countries

1 THE JOURNAL A M A State Board Number April 17 1920 pages 1084 to 1089 inclusive

NUMBERS OF STUDENTS BY CLASSES

In Table 3, on page 386, the students enrolled in each college are shown by classes This permits one to see whether the attendance at each college is increasing or decreasing The total attendance for the first year was 4,234, as compared with 3,104 last year and 4,283 in 1918 The second year attendance was 2 837, as compared with 3,587 last year, and 3,521 in 1918 The third year attendance was 3 464, as compared with 3,272 last year, and 2,893 in 1918 The enrolment of the fourth and fifth (intern) years, combined this year, is 3,553, as compared with 3,089 last year, and 2,933 in 1918 The first, third and fourth (including the fifth) year class enrolments, therefore show increases, respectively, of 1,130, 92 and 464 over the enrolments in those classes last year This indicates that the college enrolments have largely been readjusted under the higher entrance requirements and the total enrolments in medical schools are again increasing

TABLE 4.—MEDICAL COLLEGE ATTENDANCE

Year	Non sectarian	Homeo pathic	Eclectic	Physio Med	Nonde script	Total
1880	9 776	1 220	830			11 826
1890	13 521	1 164	719			15 404
1900	22,710	1 909	552			25 171
1901	23 846	1 683	664	80	144	26 417
1902	24 876	1 617	760	91	140	27 401
1903	24 930	1 498	848	149	190	27 615
1904	23 662	1 309	1 014	123	234	28 142
1905	24 119	1 104	578	114	232	26 147
1906	23 116	1 085	644	110	249	25 204
1907	22 303	1 039	545	97	292	24,276
1908	20 936	891	419	90	206	22 [illegible]
1909	20 564	899	413	52	227	22 145
1910	20 136	867	436	49	19	21 506
1911	18 414	890	436	49		19 789
1912	17 247	827	308			18 41[illegible]
1913	15 919	850	256			17 015
1914	15 438	794	270			16 502
1915	13 914	736	241			14 891
1916	13 121	638	263			14 012
1917	12 925	580	250			13 764
1918	12 727	540	138		22	13 630
1919	12 259	397	86		310	13 052
1920	13 270	386	93		339	14 088

NUMBER OF MEDICAL STUDENTS

The total number of medical students (Table 4) in the United States for the year ending June 30, 1920, excluding premedical, special and postgraduate students, was 14,088, an increase of 1,036 over last year This is the largest enrolment of students since 1915 It is noteworthy (Table 12, page 387) that in the high grade (Class A) medical colleges both the number and the percentage of students has increased Of the total number of students, 13,220 (93 8 per cent) were in attendance at the nonsectarian (regular) colleges, 386 (2 7 per cent) at the homeopathic, 93 (0 7 per cent)

(Continued on page 382)

TABLE 1—STATISTICS OF MEDICAL COLLEGES IN THE UNITED STATES AND CANADA

Marginal Number	NAME AND LOCATION OF COLLEGE	Population of City where College is Located (1920 Census Reports)	Classification by Council on Medical Education	No. of Students Registered 1919-20		Graduates 1920		Grads with A.B. B.S. or Ph.B.	Number of Teachers	Weeks in College Year	Total Fees (Dollars)				Executive Officer	Session of 1920-21		Marginal Number
				Men	Women	Men	Women				1st year	2d year	3d year	4th year		Begins 1920	Ends 1921	
	ALABAMA			51		10		2										
1	University of Alabama School of Medicine Tuscaloosa[1]	11 996	B	51	0	10	0	2	37	34	165	160	160	185	George H Denny President	Sept 6	May 25	1
	ARKANSAS			31		6												
2	University of Arkansas Medical Department Little Rock*	64 997	A	31		6			16	35	60	60			Morgan Smith M D Dean	Sept 20	June 8	2
	CALIFORNIA			428	70	77	13	48										
3	College of Medical Evangelists Los Angeles	515 480	B	89	12	14		13	109	35	217	212	197	207	P T Magan M D, Dean	Sept 5	May 26	3
4	College of Physicians and Surgeons Los Angeles[2]	576 480	B	74	11	12	2	4										4
5	College of Physicians and Surgeons of San Francisco[3]	508 410	C	15	1	15	1											5
6	Oakland College of Medicine and Surgery Oakland[4]	216 361	C	4	1	4	1											6
7	Leland Stanford Junior University School of Med San Francisco	508 410	A	124	13	17	3	19	112	34	186	186	186	186	W Ophüls M D Dean	Oct 1	June 17	7
8	University of California Medical School San Francisco	508 410	A	182	32	15	6	16	199	35	200	150	150	150	L S Schmitt M D Secretary	Aug 16	May 11	8
	COLORADO			65	6	17		4										
9	University of Colorado School of Medicine Denver[4]	256 369	A	65	6	17		4	61	34	100	100	98	103	Charles L Meader M D Dean	Sept 27	June 13	9
	CONNECTICUT			83	5	17	2	19										
10	Yale University School of Medicine New Haven	162 390	A	83	5	17	2	19	95	36	205	200	200	210	Milton C Winternitz M D Dean	Sept 30	June 22	10
	DISTRICT OF COLUMBIA			339	8	66	1	26										
11	Georgetown University School of Medicine Washington	437 571	A	170		19		5	90	34	205	200	200	210	George M Kober M D Dean	Sept 21	June 11	11
12	George Washington University Medical School Washington	437 571	A	109	5	21		3	90	34	200	200	200	200	W C Borden M D Dean	Sept 29	June 8	12
13	Howard University School of Medicine Washington	437 571	A	110	3	26	1	18	39	33	165	155	150	162	Edward A Balloch M D Dean	Oct 1	June 10	13
	GEORGIA			238		43		6										
14	Emory University School of Medicine Atlanta	200 616	A	174		28		4	98	34	172	160	160	180	W S Elkins M D Dean	Sept 21	June 6	14
15	University of Georgia Medical Department Augusta[4]	52 548	A	64		15		2	46	31	60	60	60	60	W H Doughty Jr M D Dean	Sept 15	May 30	15
	ILLINOIS			1578	112	309	12	224										
16	Chicago Medical School Chicago[5]	2 701 212	C	88		15					180	180	180	200	J L Kendall Jr M D	Oct 4		16
17	Hahnemann Medical College and Hospital of Chicago—H	2 701 212	B	45	3	9	1	5	92	34	176	162	177	192	Joseph P Cobb M D Dean	Sept 28	June 10	17
18	Loyola University School of Medicine Chicago	2 701 212	A	188	16	23			115	34	165	165	165	185	Rev P J Mahan Regent	Oct 1	June 15	18
19	Northwestern University Medical School Chicago	2 701 212	A	408		73		39	172	33	210	205	190	190	Arthur I Kendall M D Dean	Oct 5	June 11	19
20	Rush Medical College (University of Chicago)	2 701 212	A	598	74	108	7	106	301	34	230	225	225	230	John M Dodson M D Dean	Oct 1	June 15	20
21	University of Illinois College of Medicine Chicago	2 701 212	A	251	19	81	4	74	154	34	165	160	150	165	V C Lyclesbymer M D Dean	Sept 28	June 10	21
	INDIANA			221	13	48	2	48										
22	Indiana University School of Medicine Indianapolis	314 194	A	221	13	46	2	48	151	35	125	125	150	150	Charles P Emerson M D Dean	Sept 13	June 8	22
	IOWA			224	6	52	1	25										
23	State University of Iowa College of Medicine Iowa City[4]	11 267	A	224	6	52	1	25	56	35	85	85	85	85	Lee Wallace Dean M D, Dean	Sept 23	June 14	23
	KANSAS			126	7	20	3	14										
24	University of Kansas School of Medicine Rosedale Kansas City[4]	401 782	A	126	7	20	3	14	73	35	111	111	103	103	M T Sudler M D, Assoc Dean	Sept 13	June 8	24
	KENTUCKY			126	8	22	3	6										
25	University of Louisville Medical Department Louisville	234 891	A	126	8	22	3	6	119	33	200	200	200	200	Henry Enos Tuley M D Dean	Sept 21	June 2	25
	LOUISIANA			311	14	81		24										
26	Tulane University of Louisiana School of Medicine New Orleans	387 408	A	311	14	81		24	131	33	200	205	215	245	Isadore Dyer M D Dean	Sept 27	June 8	26
	MAINE			43		10		7										
27	Bowdoin Medical School Brunswick Portland	69 196	A	43		10		7	58	34	150	150	150	150	Addison S Thayer M D Dean	Oct 7	June 23	27
	MARYLAND			573	61	140	12	93										
28	Johns Hopkins University Medical Department Baltimore	733 826	A	330	60	81	12	93	185	35	267	267	267	267	J Whitridge Williams M D Dean	Sept 28	June 21	28
29	Univ of Maryland Sch of Med and Coll of P & S Baltimore	733 826	A	243	1	59			104	32	215	215	215	215	J M H Rowland M D Dean	Oct 1	June 1	29
	MASSACHUSETTS			1005	55	196	19	107										
30	Boston University School of Medicine Boston	747 923	A	73	15	9	4	12	67	33	175	162	160	190	John P Sutherland M D Dean	Oct 1	June 15	30
31	College of Physicians and Surgeons Boston[6]	747 923	C	28	4	8	1				115	110	120	125				31
32	Medical School of Harvard University Boston	747 923	A	413		96		87	222	35	230	225	225	225	David L Edsall M D Dean	Sept 27	June 23	32
33	Tufts College Medical School Boston	747 923	A	302	36	69	14	8	117	36	211	196	186	191	Charles F Painter M D Dean	Sept 16	June 20	33
34	Middlesex College of Medicine and Surgery, Cambridge—N[7]	109 456	C	189		14					150	150	150	150				34
	MICHIGAN			535	34	118	5	45										
35	University of Michigan Medical School Ann Arbor[4]	19 516	A	361	28	70	5	39	87	35	140	140	140	140	C W Edmunds M D Asst Dean	Oct 5	June 30	35
36	University of Michigan Homeopathic Med School Ann Arbor[4]—H	19 516	A	38	2	7		3	20	35	140	140	140	140	W B Hinsdale M D Dean	Oct 5	June 30	36
37	Detroit College of Medicine and Surgery Detroit	993 739	A	136	4	41		3	209	36	150	150	150	150	W H MacCracken M D, Dean	Sept 27	June 18	37
	MINNESOTA			353	15	60		55										
38	University of Minnesota Medical School Minneapolis[4]	380,582	A	353	15	60		55	140	35	180	180	180	180	Elias P Lyon M D Dean	Sept 29	June 20	38
	MISSISSIPPI			49	2													
39	University of Mississippi School of Medicine Oxford*	1 918	A	49	2				16	34	133	133			W S Leathers M D Dean	Sept 15	May 31	39

	MISSOURI			307	20	221	7	39												
40	University of Missouri School of Medicine Columbia[4 6]	10 681	A	63	6				27	32	80	56			Guy L Noyes M D Dean	Aug 30	April 27	40
41	Kansas City College of Medicine and Surgery Kansas City —N[8]	404 782	C	127	1	40	1				200	200	200	200	D R Alexander M D Dean			41
42	Kansas City Univ of Physicians and Surgeons Kansas City —N[9]	404 782	C	63	9	33	6				150	150	150	165	A L McKenzie D O President			42
43	St Louis College of Physicians and Surgeons St Louis	772 897	C	144		42					145	140	140	140	Waldo Briggs M D			43
44	St Louis University School of Medicine St Louis	772 897	A	251		63		8	132	32	200	200	200	200	Hanau W Loeb M D Dean	Oct 1	May 31	44
45	Washington University School of Medicine St Louis	772 897	A	159	4	43		31	129	33	221	216	216	221	Nathaniel Allison M D Dean	Sept 23	June 9	45
	NEBRASKA			272	11	63	2	40										
46	John A Creighton Medical College Omaha	191 601	A	98	1	23		13	56	34	175	165	165	170	H Von W Schulte M D Dean	Sept 20	June 4	46
47	University of Nebraska College of Medicine Omaha	191 601	A	174	10	40	2	27	88	34	110	120	110	110	Irving S Cutler M D Dean	Sept 17	June 4	47
	NEW HAMPSHIRE			21														
48	Dartmouth Medical School Hanover	2 075	A	21					12	36	200	200			John M Gile M D Dean	Sept 23	June 22	48
	NEW YORK			2024	138	519	23	169										
49	Albany Medical College Albany	113 344	A	78	1	21	0	3	67	35	225	200	200	200	Thomas Ordway M D Dean	Sept 20	June 13	49
50	University of Buffalo Medical Department Buffalo	50 875	A	196	15	54	3	4	112	33	245	240	240	240	C Sumner Jones M D Dean	Sept 20	June 3	50
51	Columbia University College of Phys and Surgs New York City	5 621 151	A	369	9	101		72	249	33	250	250	332	352	William Darrach M D Dean	Sept 22	June 1	51
52	Cornell University Medical College New York City	5 621 151	A	206	54	37	14	61	152	33	240	235	235	250	Walter L Niles M D Dean	Sept 27	June 9	52
53	Fordham University School of Medicine New York City[10]	5 621 151	A	118		54		4	76	35				310	Rev John A Ryan Regent	Sept 24	June 15	53
54	Long Island College Hospital Brooklyn	5 621 151	A	397	13	74	2	4	134	37	356	350	350	350	Otto V Huffman M D Dean	Sept 27	May 31	54
55	New York Homeopathic Med Coll and Flower Hospital —H	5 621 151	B	134	8	40	2	1	61	33	250	245	220	230	Milton J Reisbeck M D Registrar	Sept 6	May 13	55
56	University and Bellevue Hospital Medical College New York City	5 621 151	A	455	10	103	1	8	171	35	270	270	270	290	Samuel A Brown M D Dean	Sept 15	June 7	56
57	Syracuse University College of Medicine Syracuse	171 647	A	141	6	35	1	22	101	35	217	217	217	227	John L Heffron M D Dean	Sept 14	June 8	57
	NORTH CAROLINA			104	3													
58	University of North Carolina School of Medicine Chapel Hill[4]	1 149	A	69	3				24	34	150	150			I H Manning M D Dean	Sept 23	June 10	58
59	Wake Forest College School of Medicine Wake Forest[4]	1 443	A	45					10	34	120	120			E B Earnshaw Secretary	Sept 7	May 27	59
	NORTH DAKOTA			29	2													
60	Univ of North Dakota School of Med University (Grand Forks)[4]	13 900	A	29	2				15	35	85	85			H F French M D Dean	Sept 20	June 14	60
	OHIO			636	32	143	5	90										
61	Eclectic Medical College Cincinnati —E	401 247	B	90	3	30	2	3	39	32	160	150	150	150	John K Scudder M D Secretary	Sept 16	May 16	61
62	University of Cincinnati College of Medicine	401 247	A	209	12	42	2	31	176	34	260	210	160	180	J C Oliver M D Acting Dean	Oct 5	June 18	62
63	Western Reserve University School of Medicine Cleveland	796 870	A	175	3	48		47	120	34	220	210	204	200	Carl A Hamann M D Dean	Sept 30	June 16	63
64	Ohio State University College of Medicine Columbus[4]	237 031	A	141	9	22	1	9	91	36	152	152	152	152	C F McCampbell M D Dean	Sept 14	June 14	64
65	Ohio State University College of Homeo Medicine Columbus —H[4]	237 031	B	21	5	1			21	36	152	152	152	152	Claude A Burrett M D Dean	Sept 14	June 11	65
	OKLAHOMA			80	6	14	1	10										
66	University of Oklahoma School of Med Norman Oklahoma City	91 208	A	80	6	14	1	10	66	35	70	40	40	45	Leroy Long M D Dean	Sept 16	June 7	66
	ORI GON			82	11	13	1	5										
67	University of Oregon Medical School Portland	208 283	A	99	11	13	1	5	104	32	165	160	160	160	Richard B Dillehunt M D Dean	Oct 1	May 31	67
	PENNSYLVANIA			1333	123	334	15	125										
68	Hahnemann Medical College and Hospital of Philadelphia —H	1 823 158	A	130		37		3	90	32	230	230	232	250	William A Pearson M D Dean	Sept 27	May 31	68
69	Jefferson Medical College of Philadelphia	1 823 158	A	522		105		28	164	34	320	320	320	320	Ross V Patterson M D Dean	Sept 22	June 4	69
70	Temple University Department of Medicine Philadelphia	1 823 158	C	113	1	23			102	33	165	171	160	170	Frank C Hammond M D Dean	Sept 20	June 1	70
71	University of Pennsylvania School of Medicine Philadelphia	1 823 158	A	428	76	118	3	60	210	34	313	300	300	324	William Pepper M D Dean	Sept 24	June 15	71
72	Woman's Medical College of Pennsylvania Philadelphia	1 823 158	A		80		12	10	60	33	198	200	184	180	Martha Tracy M D Dean	Sept 20	June 15	72
73	University of Pittsburgh School of Medicine Pittsburgh	588 193	A	140	7	31		24	170	33	310	310	310	310	Raleigh R Huggins M D Dean	Sept 27	June 15	73
	SOUTH CAROLINA			62	3	14		5										
74	Medical College of the State of South Carolina Charleston	60 734	A	62	3	14		5	65	33	150	150	150	150	Robert Wilson M D Dean	Sept 24	June 2	74
	SOUTH DAKOTA			22	1													
	University of South Dakota College of Medicine Vermillion	2 590	A	22	1				8	35	60	60			C P Lommen M D Dean	Sept 27	June 25	75
	TENNESSEE			362	5	83	1	26										
76	University of Tennessee College of Medicine Memphis[4]	10 301	A	48	2	11	1	6	107	33	107	102	102	127	Melver Woody M D Dean	Sept 25	June 7	76
	University of West Tennessee Medical Department Memphis	10 301	C	10		1					80	0	80	90	M V Lynk M D Dean			77
78	Meharry Medical College Nashville	118 342	B	182	3	39		18	80	30	87	87	87	94	G W Hubbard M D President	Oct 5	May 19	78
79	Vanderbilt University School of Medicine Nashville	118 342	A	132		29		2	79	33	160	160	160	180	G Canby Robinson M D Dean	Sept 27	June 8	79
	TEXAS			333	22	95	5	30										
80	Baylor University College of Medicine Dallas	158 906	A	137	4	33		9	4	32	165	160	160	150	Edward H Cary M D Dean	Sept 27	May 26	80
81	University of Texas Department of Medicine Galveston[4]	41 563	A	91	18	62	5	21	42	32	48	48	31	21	W S Carter M D Dean	Oct 1	May 31	81
	UTAH			30	1													
	University of Utah School of Medicine Salt Lake City	118 110	A	30	1				24	33	110	110			Perry G Snow M D, Dean	Sept 28	June 5	82
	VERMONT			103		22		2										
83	University of Vermont College of Medicine Burlington	99 749	A	103		22		2	16	30	145	145	145	170	H C Tinkham M D Dean	Sept 27	June 20	83

E Eclectic H Homeopathic N Nondescript
C Gives only the first two years of the medical course
1 This school has just been moved from Mobile to Tuscaloosa and clinical teaching has been suspended
2 This school has just been suspended
3 The two colleges consolidated teaching in 1918 but retain a nominal existence until 1921 in order to grant degrees to the three remaining classes which are being taught elsewhere
4 The following state universities make an additional charge for students who are nonresidents as follows Colorado $70 Georgia $0 Iowa $1 Kansas $10 Michigan $50 Minnesota, $0 Missouri $10 Ohio $0 Tennessee $40 Texas $100 West Virginia $50
5 This was formerly the Chicago Hospital College of Medicine
6 Figures for enrolment approximate graduates exact
7 Figures are as reported regarding students and graduates They have not been verified
8 Figures for enrolment approximate graduates exact
9 Formerly the Central College of Osteopathy Reported to be conducting both osteopathic and medical courses
10 Ordered closed by trustees in 1919 Has continued for two years until two remaining classes are graduated Will permanently close in 1921

TABLE 1—STATISTICS OF MEDICAL COLLEGES IN THE UNITED STATES AND CANADA—(Concluded)

Marginal Number	NAME AND LOCATION OF COLLEGE	Population of City where College is Located (1920 Census Reports)	Classification by Council on Medical Education	No. of Students Registered 1919-20		Grads 1920		Grads with A B B S or Ph B	Number of Teachers	Weeks in College Year	Total Fees (Dollars)				Executive Officer	Session of 1920-21	
				Men	Women	Men	Women				1st year	2d year	3d year	4th year		Begins 1920	Ends 1921
	VIRGINIA																
84	Medical College of Virginia Richmond	166 687	A	234	8	50	1	19	112	34	210	210	210	210	F C L Miller M D Dean	Sept 15	June 5
85	University of Virginia Department of Medicine Charlottesville	10 688	A	103	6	28	1	10	45	36	205	208	165	150	Theodore Hough, M D Dean	Sept 16	June 15
	WEST VIRGINIA			53	2			9									
86	West Virginia University School of Medicine Morgantown*	12 117	A	53	2	2			16	35	30	30			John N Simpson M D Dean	Sept 20	June 15
	WISCONSIN			225	19			2									
87	University of Wisconsin Medical School Madison*	38 378	A	123	18	2			48	35	104	97			Chas R Bardeen M D Dean	Sept 23	June 17
88	Marquette University School of Medicine Milwaukee	457 147	A	102	1			2	79	34	200	200	250	250	Louis F Jermain M D Dean	Oct 1	June 14
	CANADA ††			2327	138	243	8	39									
89	University of Alberta Faculty of Medicine Edmonton Alta	5 579	1	123	12				26	30	89	89			Cecil E Race Registrar	Sept 27	May 12
90	Dalhousie University Faculty of Medicine Halifax N S	46 619	B	126	13	9	2	1	40	32	140	150	150	150	John Stewart M D Dean	Sept 29	May 26
91	Queen's University Faculty of Medicine Kingston Ont	18 874	B	229		21		3	60	32	144	144	144	134	J O Connell M D Dean	Sept 29	May 29
92	University of Toronto Faculty of Medicine Toronto Ont	376 538	A	1002	80	70	4	15	271	32	160	160	160	160	A Primrose M D Dean	Sept 28	May 31
93	Western University Faculty of Medicine London Ont	46 300	B	119		11		2	43	32	120	128	128	153	Paul S McKibben M D Acting Dean	Oct 4	May 26
94	McGill University Faculty of Medicine Montreal Que	470 480	A	616	8	82		13	135	32	161	167	167	197	John W Scane M D Registrar	Oct 1	June 6
95	University of Montreal Medical Faculty Montreal Que	470 480	A	267		32			80	31	125	125	125	145	Louis Daniel Mignault M D Secretary	Oct 1	June 28
96	Laval University Faculty of Medicine Quebec Que	78 150	B	140		25			35	36	125	125	125	145	Edwin Turcot M D Dean	Sept	June
97	University of Manitoba Faculty of Medicine Winnipeg	136 035	B	196	23	23	2	5	90	28	165	170	160	160	S Willis Prowse M D Dean	Sept 14	April 15

F Eclectic H Homeopathic N Nondescript
* Gives only the first two years of the medical course

†† The Canadian schools count the one or two years devoted to premedical sciences as a part of the medical course

Enrolments include students of all last four years only are shown The fees for the years

(Continued from page 379)

at the eclectic, and 389 (2 8 per cent) were enrolled in three nondescript colleges These three colleges consist of two semi-osteopathic and one nominally eclectic affair Two of them are outlawed in their home state—Missouri—and one is in Massachusetts, which has a feeble medical practice law None of them, therefore, is subject to rigid laws or regulations One of them, the Kansas City College of Medicine and Surgery, exists only by the enjoyment of special privileges obtained through a sectarian licensing board in an adjoining state, the Eclectic Board of Arkansas, even though it is disowned as an eclectic college by the National Eclectic Medical Association

NUMBER OF MEDICAL GRADUATES

The total number of graduates for the year ending June 30, 1920, was 3,047, an increase of 391 over 1919 The number of graduates from the nonsectarian colleges was 2,826, or 403 more than last year The number from the homeopathic colleges was 97, or 8 more than last year, and from the eclectic colleges there were 30 graduates, or 2 more than last year The three nondescript colleges had 94 graduates, or 22 less than last year

TABLE 5 —MEDICAL COLLEGE GRADUATES

Year	Non sectarian	Homeopathic	Eclectic	Physio Med	Nondescript	Total
1889	2 673	389	188			3,241
1890	3,853	350	221			4 404
1900	4 715	413	86			5,214
1901	4 879	387	148	18	12	5 444
1902	4 508	336	138	16	11	5 009
1903	5 088	420	149	24	17	5 698
1904	5 190	371	146	20	20	5 747
1905	5 126	276	153	22	23	5 600
1906	4 841	256	186	22	29	5,364
1907	4 591	225	121	11	32	4 980
1908	4 370	215	116	12	28	4 741
1909	4 163	200	84	15	44	4 515
1910	4 113	183	114	16	14	4 440
1911	4 006	152	110	5		4 273
1912	4 206	185	92			4 483
1913	3 679	209	93			3 981
1914	3 370	154	70			3 594
1915	3 286	195	55			3 536
1916	3 274	166	78			3 518
1917	° 134	180	65			3 379
1918	2,454	114	42		60	2 670
1919	2 423	89	28		116	2 656
1920	2 826	97	30		94	3 047

Of the 3,047 medical graduates, 1,321 (see Table 11) held also degrees in arts or science This total includes those taking the combined courses in arts or science and medicine This year 43 4 per cent of all graduates held collegiate degrees, as compared with 15 3 per cent in 1910 This increase is what was expected under the general adoption by medical schools of the entrance requirement of two years of college work Of the 2,826 nonsectarian school graduates, 1,307 or 46 2 per cent were reported to have baccalaureate degrees, of the homeopathic graduates, 11, or 11 3 per cent, were so reported, and of the eclectic graduates this year, 3, or 10 per cent, held such degrees Of the 94 graduates of the nondescript

GRADUATES HOLDING DEGREES IN ARTS

colleges not one was reported as holding a bachelor's degree in arts or science As will be noted by referring to Table 11, of the 1,321 graduates holding baccalaureate degrees, 224—the largest number—came as last year from the Illinois colleges New York had 168 graduates this year holding baccalaureate degrees, followed by Pennsylvania with 125 and Massachusetts with 114 The percentage of graduates holding collegiate degrees should continue to increase, since all the better medical schools are now requiring two years of college work for admission, which brings more students in reach of the combined course for the B S and M D degrees

TABLE 6—MEDICAL GRADUATES WITH LIBERAL ARTS DEGREES

Year	Nonsectarian			Homeopathic			Eclectic			Totals		
	Graduates	A B or B S	Per Cent	Graduates	A B or B S	Per Cent	Graduates	A B or B S	Per Cent	Graduates	A B or B S	Per Cent
1910	4 113	664	16 1	183	13	7 1	114	3	2 6	4 440	680	15 3
1911	4 006	683	17 0	152	18	11 8	110	4	3 6	4 273	705	16 5
1912	4 206	744	17 7	185	15	8 1	92	4	4 3	4 483	763	17 0
1913	3 670	732	19 9	209	20	9 6	93	1	1 1	3 981	753	18 9
1914	3 370	794	23 5	154	7	4 5	70	6	8 6	3,594	807	22 5
1915	3 286	839	25 5	195	16	8 2	55	3	5 5	3 536	858	24 3
1916	3 274	928	28 3	166	20	12 0	78			3 518	948	26 9
1917	3 154	1078	34 4	180	19	10 5	65	2	3 1	3 399	1099	32 5
1918	2 454	1007	41 0	114	15	13 2	60			2 670	1074	38 4
1919	2 4 3	1167	48 0	89	16	18 0	28	2	7 1	2 656	1180	44 4
1920	2 826	1307	46 2	97	11	11 3	30	3	10 0	3 043	1321	43 5

* No graduates of nondescript colleges during the last three years were reported to have collegiate degrees

TABLE 7—WOMEN IN MEDICINE

Year	Total Women Students	Percentage of All Students Both Sexes	Total Women Graduates	Percentage of Graduates Both Sexes	Women's Colleges	Students	Percentage of All Women Students	Graduates	Percentage of All Women Graduates	Co-ed Schools	Students	Percentage of All Women Students	Graduates	Percentage of All Women Graduates
1904	1 129	4 3	244	4 0	3	183	16 2	56	23 0	97	946	83 8	198	77 0
1905	1 073	4 1	219	4 0	3	221	20 6	54	24 5	96	852	79 4	165	75 5
1906	895	3 5	233	4 3	3	189	21 0	33	14 1	90	706	79 0	200	85.9
1907	928	3 8	211	4 2	3	210	22 6	39	18 5	86	718	77 4	172	81 5
1908	835	3 7	185	3 9	3	186	22 3	46	24 9	88	649	77 7	139	75 1
1909	921	4 2	162	3 7	3	169	18 4	53	20 3	91	752	81 6	129	79 7
1910	907	4 2	157	3 5	3	155	17 1	41	26 1	82	752	82 9	116	73 9
1911	680	3 4	150	3 7	2	134	19 7	36	22 6	74	546	80 3	103	77 4
1912	679	3 2	142	3 2	2	143	21 1	32	22 5	64	536	78 9	110	77 5
1913	640	3 8	154	3 8	2	138	21 6	33	21.4	54	502	78 6	121	78 6
1914	631	3 8	121	3 4	2	125	21 4	25	20 7	54	496	78 6	96	79 3
1915	599	4 0	170	3 7	2	116	19 6	38	29 2	53	462	80 4	92	70.8
1916	566	4 0	134	3 8	2	102	18 0	28	20 0	51	464	82 0	106	80 0
1917	610	4 5	153	4 5	2	81	13 3	29	18 9	56	529	86 7	124	81 1
1918	581	4 3	106	4 0	2	70	12 0	12	11 3	60	511	87 9	94	88 7
1919	656	5 2	107	4 0	1	66	10 0	7	6 5	59	620	90 4	100	93 4
1920	818	5 8	134	4 4	1	89	10 9	12	9 0	64	727	90 1	122	91 0

WOMEN IN MEDICINE

During the past year there were 818 women studying medicine or 132 more than last year, and 237 more than in 1918 The percentage of women to all medical students this year is 5 8, the largest percentage since the presenting of these statistics was begun There were 134 women graduates this year, 27 more than last year, but 19 less than in 1917 Of all the women matriculants, 89 were in attendance at the one medical college for women, while 727 (90 1 per cent) were matriculated in the 64 coeducational colleges From the one women's college there were 12 graduates, while 122 (91 0 per cent) secured their degrees from coeducational colleges This increase of women students in coeducational colleges is not surprising, since in recent years some of the largest and oldest medical schools, as Columbia, Tulane, the University of Pennsylvania, Harvard and Western Reserve University, have thrown open their doors to women

NUMBER OF COLLEGES

Since June 30, 1919, one college the College of Physicians and Surgeons of the University of Southern California, was closed, and Fordham University School of Medicine was temporarily reopened, leaving 85 still existing Of these, 76 are nonsectarian (regular), 5 are homeopathic, 1 is eclectic and 3 are nondescript Two of the nondescript colleges are not recognized by the licensing board of Missouri the state in which they are located

TABLE 8—MEDICAL COLLEGES

Year	Non sectarian	Homeopathic	Eclectic	Phy to Med	Nondescript	Total
1850	44	3	4	1		52
1860	53	6	4	2		65
1870	60	8	5	2		75
1880	76	14	8	2		100
1890	106	16	9	[illegible]		133
1900	126	22	9	[illegible]	1	160
1901	126	22	10	2	1	160
1902	126	20	9	3	2	160
1903	126	20	9	3	2	160
1904	127	19	9	3	2	160
1905	125	19	9	3	2	158
1906	126	19	8	3	2	158
1907	127	18	9	3	2	159
1908	120	18	9	2	2	151
1909	116	18	8	1	1	140
1910	109	12	8	1	1	131
1911	103	12	7			1
1912	101	11	6			118
1913	92	10	5			107
1914	87	10	5			102
1915	83	9	4			96
1916	82	10	3			95
1917	83	9	4			96
1918	79	6	2		3	90
1919	76	5	1		3	85
1920	76	5	1		3	85

TABLE 9—COLLEGE TERMS

Year	23 to 26 weeks		27 to 28 weeks		29 to 30 weeks		31 to 32 weeks		33 to 34 weeks		35 to 36 weeks		Over 36 weeks	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1901	58	36 5	47	29 4	8	5 0	26	16 4	4	2 5	18	11 3	3	1.9
1902	44	28 4	44	28 4	11	7 1	33	21 3	3	1 9	18	11 6	2	1 3
1903	33	21 4	46	29 9	15	9 7	37	24 0	2	1 3	19	12 4	2	1 3
1904	27	16 3	44	26 5	23	13 8	37	22 3	13	7.8	20	12 0	3	1.8
1905	15	9 4	35	21 8	12	7 5	44	27 5	13	8 1	28	17 5	3	1 9
1906	14	8 7	35	21 7	26	16 1	32	19 9	24	14 9	26	17 4	3	1 9
1907	6	3 7	24	16 8	26	16 1	47	29 1	29	18 0	23	15 0	2	1 3
1908	2	1 3	21	13 8	28	18 4	51	33 6	24	15.8	22	14 5	4	2 6
1909	4	2.3	17	11 6	23	16 4	51	34.9	18	1 3	30	20 5	3	2.0
1910	2	1 5	8	6 0	19	14 3	42	31 5	0	2 6	30	22 6	2	1 5
1911			6	5 0	16	13 3	37	30 8	22	1 7	19	15 4	1	0.8
1912	1	0 9	1	0 9	11	9.5	24	20 3	27	23 8	21	20 7	1	0 9
1913			3	2 8	5	4 7	29	27 4	11	10 7	17	16 3	1	0 9
1914			2	2 0	4	4 0	25	24 8	11	10 9	28	27 7	1	1 0
1915			1	1 0	5	5.3	22	23.2	9	9 5	20	21 0	1	1 0
1916					4	4.2	17	17 9	13	13 7	23	24 2		
1917					1	1 0	15	15 6	16	16 8	34	35 4		
1918					2	2 2	23	25 6	10	11 1	31	34 4		
1919					1	1 2	11	12 9	11	12 9	23	27 1	1	1 2
1920					1	1 2	10	11 8	12	14 1	29	34 1		

Information not furnished by six Class C colleges during the last three years

(Continued on page 86)

TABLE 2—DISTRIBUTION OF

Marginal Number	NAME OF COLLEGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Marginal Number
		178	11	80	519	128	234	26	88	52	273	32	1 069	389	384	250	193	144	64	176	765	
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Dist of Col	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	
1	University of Alabama School of Medicine	45																				1
2	University of Arkansas Medical Department			24	3									1				1				2
3	College of Medical Evangelists		2		42	5			2	1		1	2			4				3	1	3
4	College of Physicians and Surgeons Los Angeles				77								1								1	4
5	Oakland College of Medicine and Surgery				5																	5
6	College of Physicians and Surgeons of San Francisco				15																	6
7	Leland Stanford Junior Univ School of Medicine*		1		93	5			1			2		1	1			1				7
8	University of California Medical School				193	1										1						8
9	University of Colorado School of Medicine					59				1	1				1	1						9
10	Yale University School of Medicine						68				1									1	2	10
11	Georgetown University School of Medicine						3		18					2	2			1	2	4	9	11
12	George Washington University Medical School				1	1	4	1	32		2		2			1		1		3	1	12
13	Howard University School of Medicine	4		1					16	2			1				4	2		6		13
14	Emory University School of Medicine	21								5	123				2		2					14
15	University of Georgia Medical Department										59											15
16	Chicago Medical School												88									16
17	Hahnemann Medical College and Hospital of Chicago	1		1									13	6	3	1	1					17
18	Loyola University School of Medicine					1	1				1		13	4	5	2	1				2	18
19	Northwestern University Medical School	2	1	3	2	8				1	1	5	185	14	22	11					1	19
20	Rush Medical College (University of Chicago)	1		2	8	10			1	2		5	277	32	41	31	3	1	1			20
21	University of Illinois College of Medicine	1	1		3	3							192	7	14	1	1					21
22	Indiana University School of Medicine												3	223			1					22
23	State University of Iowa College of Medicine				1							1	1		219							23
24	University of Kansas School of Medicine														1	119						24
25	University of Louisville Medical Department	4		5	1					2	1	2	6	18	2	1	43	1			1	25
26	Tulane University of Louisiana School of Medicine	48	1	13	3	1				11	10			1		1		113				26
27	Bowdoin Medical School						5												27		3	27
28	Johns Hopkins University Medical Department	3		2	10	5	13	2	6	2	14		6	5	4	1	8	2	4	68	10	28
29	Univ of Maryland Sch of Med & Co of P and S	1					13	6		2							3			74	2	29
30	Boston University School of Medicine	1			1		3	1		1	2					1			1		31	30
31	College of Physicians and Surgeons Boston †																				32	31
32	Medical College of Harvard University	4			8	7	17		3	2	11	1	9	4	1	2			16	1	164	32
33	Tufts College Medical School						10		1										7		259	33
34	Middlesex College of Medicine and Surgery—N*																				189	34
35	University of Michigan Medical School		1	1	2	3	4		1	1	1		10	16	1	1	2			1	3	35
36	University of Michigan Homeo Med School—H				2										2							36
37	Detroit College of Medicine and Surgery																					37
38	University of Minnesota Medical School		1		3	1						1	2	1	5	1						38
39	University of Mississippi School of Medicine	5																				39
40	University of Missouri School of Medicine												1		1							40
41	Kansas City College of Medicine and Surgery—N																					41
42	Kansas City University of Physicians and Surgs—N	1			5	3					2	1	2	1	1	7						42
43	St Louis College of Physicians and Surgeons*			4									23			10						43
44	St Louis University School of Medicine				18	2					1		37	6	12	11	1	2				44
45	Washington University School of Medicine		1	3	2	2							21	3	3	15						45
46	John A Creighton Medical College					3						1		1	18	7						46
47	University of Nebraska College of Medicine				1	1						2			11	2		1				47
48	Dartmouth Medical School						1														2	48
49	Albany Medical College						1							1							2	49
50	University of Buffalo Medical Department						1				1											50
51	Columbia University College of Phys and Surgs	1	1	2	1	1	13		1		3	1	3	1			1		1		3	51
52	Cornell University Medical College	1			4	2	9				2		3	1				1	1	1	9	52
53	Fordham University School of Medicine						7														3	53
54	Long Island College Hospital						5															54
55	New York Homeo Med College and Flower Hosp—H																				1	55
56	University and Bellevue Hospital Medical College				1		17			1	2		1		1						5	56
57	Syracuse University College of Medicine				1																	57
58	University of North Carolina School of Medicine									1	1											58
59	Wake Forest College School of Medicine			1						1												59
60	University of North Dakota School of Medicine																					60
61	Eclectic Medical College Cincinnati—F										2		4	4		1	7		1	1		61
62	University of Cincinnati College of Medicine												4	16		2	23					62
63	Western Reserve University School of Medicine	2								1		2	1	3	2	3	1					63
64	Ohio State University College of Medicine													4								64
65	Ohio State Univ College of Homeo Medicine—H													1								65
66	University of Oklahoma School of Medicine																1	2				66
67	University of Oregon Medical School		1		1							2			1							67
68	Hahnemann Med College and Hospital of Phila—H						2	4									2			4	2	68
69	Jefferson Medical College of Philadelphia	1		1	1		15	8		1	4	2	3	3	2	4	2		2	3	12	69
70	Temple University Department of Medicine	1							1		1			1					1		1	70
71	University of Pennsylvania School of Medicine	3			4	4	6	2	1	2		1	2	1	2	3	3			4	1	71
72	Woman's Medical College of Pennsylvania				2		4	2		1	1		2	1	1	1	3				3	72
73	University of Pittsburgh School of Medicine																				1	73
74	Medical College of the State of South Carolina										1											74
75	University of South Dakota College of Medicine																				1	75
76	University of Tennessee College of Medicine			1						2		1				1						76
77	University of West Tennessee Medical Department																					77
78	Meharry Medical College	11		10					1	2	17		9			2	5	9		1	1	78
79	Vanderbilt University School of Medicine	13		5	2					2	3		2	1			9	6				79
80	Baylor University College of Medicine			1	1		1				1			1		1		1			1	80
81	University of Texas Department of Medicine																					81
82	University of Utah School of Medicine														1							82
83	University of Vermont College of Medicine						9			1											12	83
84	Medical College of Virginia	1					1					1							1			84
85	University of Virginia Department of Medicine	1			1		1		3	4	4			1			1					85
86	West Virginia University School of Medicine																				1	86
87	University of Wisconsin Medical School				1							1	6	3	2	1						87
88	Marquette University School of Medicine	1											1									88
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

E—Eclectic H—Homeopathic N—Nondescript * Figures exact distribution approximate † Figures and distributionapproximate

Marginal Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51		
	Michigan 435	Minnesota 364	Mississippi 143	Missouri 501	Montana 50	Nebraska 248	Nevada 5	New Hampshire 48	New Jersey 305	New Mexico 9	New York 2 138	North Carolina 282	North Dakota 83	Ohio 702	Oklahoma 112	Oregon 122	Pennsylvania 1 093	Rhode Island 73	South Carolina 139	South Dakota 89	Tennessee 179	Texas 460	Utah 111	Vermont 55	Virginia 275	Washington 83	West Virginia 142	Wisconsin 979	Wyoming 5	Philippines etc 111	Foreign 979	Totals 11 069	Marginal Number
1											3																				1	51	1
2											1				2					1												31	2
3	4	1			3	2				1	2		2			3	1			2	2			1	4				1	2	3	101	3
4		1								1						1															3	5	4
5																																	5
6																										1						10	6
7				1	1		3				1			1		4							5	1		10					5	13	7
8	2				1						1				1	6							1			1					5	214	8
9						1				1	1			1			1					1		1		1		1				1	9
10								1	1		5			1				1	1											1	4	88	10
11	1	4		1					17		22			2			15	2			1			3		1				3	1 0	11
12	3					1			1		14	3	1	1			8	1	2		1	5				1		1		3	10	114	12
13			3						5		7	13			1		8	1	3		9			11				1		1	18	113	13
14				2							1	6							3								1			1	2	174	14
15											1								4													21	15
16																																8	16
17	2	1												1			2											1		4	11	48	17
18	8	3		2		1					4			2			6	1			9				1					11	6	201	18
19	13	11	4	20	2	13		1	2	1			19	7	3	1	1			4	1	3	4		1	14		10	1	2	6	405	19
20	17	19	2	11	7	10	2	2	1	1	5		15	14	3	13	4				4	9	12		1	8				6	10	73	20
21	5	6		4		2				1	5		3	2			1		1	2			2			1		4		5	3	2	21
22												1		2				1					1							1	1	32	22
23		2												1						1		1						1		1	1	9	23
24				10											1											1				1		12	24
25	1	1	1	4	1						2	1		10	1		2				3	4		1	1	9	1				19	25
26			44						2		13	8					1		2		3	41		2						2	6	34	26
27								2	1		1							1						1								42	27
28	4	1	1	3	1	4			11		35	14	3	28		1	29	8	10	1	10	15		1	2	8	3	1		11		330	28
29	4								21		30	14		3			17	2	4					11		19			13	5		244	29
30								1	4		14	3					4		3											3	10	88	30
31																																82	31
32	4	5		8		6		4	10	1	22	1		14	3	6	15	13	2		1	3	6	4	7	1		11	1	2	13	413	32
33								15	4		8			1			2	2												8	3	336	33
34																																	34
35	102	1		5	2				4	1	31	1	1	4	1		24		1		1	1		1		3	3			3	12		35
36	26										3		1	3			2		1								1					46	36
37	125													4			2			1												140	37
38	2	277		3	10	1		1			2		15	1		3				1				1	7		1			3	368	38
39			46																												51	39
40	1			57							6				1																63	40
41				128																										2		128	41
42		5		30	3	1								2	2	1	1									2						42
43				98																												141	43
44	6	4	1	94	2	1			1	1	7		1	20	2		3			2		3	1		1				3		251	44
45			2	85	2	1						2	1	1	3	1				3		3	1		1		4		1	1	103	45
46		6		1	8	38								1						6			1			4		1		1	32	46
47				3	1	151														3			1							4	3	181	47
48								5	3		9													1								21	48
49									4		69																				2	79	49
50											203						6															211	50
51				1	1	1		7	54		258	1		2		1	5	3			4	6	8		1	2	1	3			6	326	51
52									32		178			2			4	1	2		1		1		1			1			1	80	52
53									14		92							1														118	53
54									10		324													1								240	54
55									11		198			1				1														14	55
56			1						50		378						1	1			1	1	1					1			2	46	56
57									2		132			1			3								2					4	2	147	57
58												56							1												1	67	58
59												41							2													45	59
60		2											26																		1	2	31	60
61	3					1					18			43			5															9	61
62	3	1		1		1					2			143			3				2				3	1	12	3		1	3	221	62
63	1		1								2			129			10		1			8				6	3				178	63
64														142																	1	144	64
65											1			90			2									1					1	95	65
66						1					1				79																1	82	66
67		1														85										10						96	67
68				1					10		8	1		3			80															103	68
69		3	1	8		3			29		26	47	1	20		3	45	3	10	1	5	5	9	1	2	5	10	2		1	2	1	69	69
70	1				1				14		12			1		1	7		1													114	70
71	1	2	4	6	1	3		3	29		10	23		3		1	26		3	2	7	6	8			6	3			14		144	71
72				1					6		5	5		5			33				13			1	4		1			6		69	72
73														8			138															14	73
74												2		1					61													2	74
75		2															2			18												2	75
76			1																		42	2										73	76
77																					10											10	77
78	1		23	6		4			1		2	12		3	5		1		13		14	18			4						10	16	78
79			3									3			1				3		1	1			1							12	79
80	2							1	1		10	2			2		2					10										111	80
81											2				1						1	69						1		1		219	81
82																							33									33	82
83								5	9		16			1			1	3												1		16	83
84											1	15		1			2		1				1	43	100		3	1		1	1	175	84
85			5						1		1										4	1			14							101	85
86											1			2																		7	86
87	1	1			3									1		1																141	87
88	3	4				1					2			2																		10	88
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51		

Name of College	Enrolled During 1919-20					
	1st year	2d year	3d year	4th year	5th year	Total
University of Alabama School of Med	13	16	12	10		51
University of Arkansas Medical Dept	6	3	16	6		31
College of Medical Evangelists	42	26	16	17		101
College of Phys and Surgs Los Angeles	32	20	19	14		85
Coll of Phys and Surgs San Francisco[1]				16		16
Oakland College of Medicine and Surgery[1]				5		5
Leland Stanford Junior Univ Sch of Med	46	27	28	17	19	137
University of California Medical School	59	63	44	27	21	214
University of Colorado School of Med	18	20	15	18		71
Yale University School of Medicine	34	18	17	19		88
Georgetown University School of Med	47	35	22	16		120
George Washington Univ School of Med	25	18	40	31		114
Howard University School of Medicine	29	18	33	33		113
Emory University School of Medicine	58	40	48	28		174
University of Georgia Medical Dept	17	13	19	15		64
Chicago Medical School	16	20	25	27		88
Hahnemann Medical College and Hospital of Chicago—H	11	15	11	11		48
Loyola University School of Medicine	16	16	92	80		204
Northwestern University Medical School	107	65	79	86	71	408
Rush Medical College (Univ of Chicago)	120	121	147	169	115	672
University of Illinois College of Med	103	50	72	45		270
Indiana University School of Med	80	39	60	51	4	234
State University of Iowa College of Med	76	50	50	54		230
University of Kansas School of Med	45	32	32	24		133
University of Louisville Medical Dept	44	17	44	27		132
Tulane Univ of Louisiana School of Med	88	56	97	84		325
Bowdoin Medical School	20	6	7	10		43
Johns Hopkins University Med Dept	98	90	95	102		390
University of Maryland School of Medicine and College of Phys and Surgs	50	58	74	62		244
Boston University School of Medicine	30	10	17	13		88
College of Phys and Surgs Boston	7	8	8	9		32
Medical School of Harvard University	120	88	101	104		413
Tufts College Medical School	78	87	93	80		338
Middlesex College of Med and Surg—N[3]	68	54	53	14		189
University of Michigan Medical School	146	88	78	77		389
Univ of Michigan Homeo Med Sch—H	20	8	5	7		40
Detroit College of Medicine and Surgery	31	15	53	41		140
University of Minnesota Medical School	77	83	86	62	60	368
University of Mississippi School of Med *	29	22				51
University of Missouri School of Med *	39	30				69
Kansas City College of Med & Surg—N	30	22	35	41		128
Kansas City Univ of Phys & Surgs—N	7	7	19	39		72
St Louis College of Phys and Surgs[3]	40	32	30	42		144
St Louis University School of Medicine	63	29	85	74		251
Washington University School of Med	43	35	39	46		163
John A Creighton Medical College	32	22	22	23		99
University of Nebraska College of Med	63	28	49	44		184
Dartmouth Medical School*	7	14				21
Albany Medical College	25	16	17	21		79
University of Buffalo Medical Dept	67	24	62	58		211
Columbia Univ Coll of Phys & Surgs	98	77	122	101		398
Cornell University Medical College	111	50	48	51		260
Fordham University School of Med[4]			64	54		118
Long Island College Hospital	107	53	103	77		340
New York Homeopathic Medical College and Flower Hospital—H	39	24	45	34		142
University and Bellevue Hosp Med Coll	166	80	106	113		465
Syracuse University College of Medicine	41	36	34	36		147
University of No Carolina Sch of Med *	36	26				62
Wake Forest College School of Medicine	28	17				45
University of North Dakota Sch of Med *	20	11				31
Eclectic Medical College Cincinnati—F	13	23	24	33		93
University of Cincinnati College of Med	72	42	62	45		221
Western Reserve University Sch of Med	49	34	41	54		178
Ohio State University College of Med	69	34	33	23		159
Ohio St Univ Coll of Homeo Med—H	7	8	10	1		26
University of Oklahoma School of Med	33	20	18	15		86
University of Oregon Medical School	34	18	17	14		103
Hahnemann Medical College and Hospital of Philadelphia—H	20	20	53	37		130
Jefferson Medical College of Philadelphia	174	66	114	168		522
Temple University Department of Med	24	29	28	33		114
University of Pennsylvania Sch of Med	114	86	122	132		454
Woman's Med College of Pennsylvania	28	31	17	13		89
University of Pittsburgh School of Med	52	22	36	37		147
Med College of the State of So Carolina	23	17	10	15		65
University of So Dakota Coll of Med *	14	9				23
University of Tennessee College of Med	10	4	21	15		50
University of West Tennessee Med Dept[2]	3	3	3	1		10
McHarry Medical College	69	32	44	40		185
Vanderbilt University School of Medicine	37	15	40	30		122
Baylor University College of Medicine	33	28	47	33		141
University of Texas Dept of Medicine	78	47	27	67		219
University of Utah School of Medicine	23	13				36
University of Vermont College of Med	25	17	37	24		103
Medical College of Virginia	55	29	28	25		137
University of Virginia Dept of Med	33	22	20	28		103
West Virginia University School of Med *	24	31				55
University of Wisconsin Medical School	91	50				141
Marquette University School of Med	39	25	24	15		103
Totals for 1920	4234	2837	3464	3263	290	14088
Totals for 1919	3104	3087	3272	2967	122	13052
Totals for 1918	4283	3021	2893	2933		13630

H Homeopathic F Eclectic N Nondescript
* Give only first two years of medical course
1 Suspended teaching in 1918 but are retaining nominal existence to grant diplomas to the remaining classes
2 Number and distribution of students are approximate number of graduates is exact
3 Distribution by classes is approximate totals are exact
4 Had only two classes will close June 1921

(Continued from page 383)

LENGTH OF TERMS

During the last twenty years there has been a decided lengthening of college terms This has reference to the weeks of actual work exclusive of holidays Prior to 1904 the majority of colleges had sessions of twenty-eight weeks or less For five years no colleges have had sessions shorter than twenty-nine weeks, and this year only one college reported a session as short as thirty weeks Sessions of from thirty-three to thirty-six weeks were reported by 67, or 78 9 per cent, of all colleges

TUITION AND OTHER FEES

Attention is called to Table 1, on pages 380-382, to the amount charged by the various medical colleges per annum for tuition, matriculation, laboratory and graduation fees for each student In Table 10, the eighty-five colleges have been grouped according to the amount of fees charged and according to their classification by the Council on Medical Education and Hospitals Twelve colleges charge fees of $100 or less per year, *thirty-four* between $100 and $175, thirty-one between $175 and $250, and eight charge above $250 Of the twelve colleges charging $100 or less, ten (83 per cent) are listed among Class A (acceptable) colleges[2] by the Council on Medical Education, while one each is in Class B and Class C The ten Class A colleges having these low fees are the schools of medicine of the state universities of Iowa, Missouri, Oklahoma, North Dakota, South Dakota, Texas and West Virginia—for residents of those states On the other hand, five colleges listed by the Council in Class C charge fees of from $100 to $175 per year for each student, and two exact fees of about $200 Diplomas from Class C colleges are reported as not recognized by from 37 to 42 state licensing boards[3] No intelligent student would knowingly spend his time and money in a low-grade college, the diplomas of which are not recognized by many states, when in the same time, and for even less money, he could attend one of the best-equipped colleges, the diplomas of which are recognized everywhere Although 45 colleges listed in Class A charge fees ranging from $150 to $350 per year for each student, the actual expense for teaching that student

2 See classification on p 395
3 See THE JOURNAL A M A April 17 1920 p 1092 Table D

for the year in these colleges is much more than the fee charged This larger expenditure is possible because the colleges receive either state aid or private endowment This shows that no medical college can properly teach medicine on the income received from fees alone

COLLEGES STUDENTS AND GRADUATES BY STATES

Illinois formerly had the largest number of medical colleges (Table 11), but for the last three years the first place has been held by New York where there are still nine colleges Illinois, Missouri and Pennsylvania have six colleges each, Massachusetts and Ohio have five each, and Tennessee has four Of Class C colleges, however, Missouri has three, Massachusetts has two, and there is one each in Illinois and Tennessee In Missouri the Class C colleges are not recognized by the local state licensing board and exist because that board does not have or does not exert the power to their charters revoked

For the last four years New York has had the largest number of students enrolled, this year having

TABLE 10—COLLEGE FEES

Total Fees	Number of Colleges			
	Class A	Class B	Class C	Total
$ 50 or less	3			3
50 to $ 75	4			4
75 to 100	3	1	1	5
100 to 125	7		1	8
125 to 150	8		3	11
150 to 175	11	3	1	15
175 to 200	9	1	2	12
200 to 225	11	1		12
225 to 250	6	1		7
250 to 275	2			2
275 to 300	2			2
300 or above	4			4
Totals	70	7	8	85

2,160, followed by Illinois with 1,690 and Pennsylvania with 1,456 New York leads also in the number of graduates, having reported 542 followed by Pennsylvania with 399, Illinois with 321, Missouri with 228, and Massachusetts with 215

QUALIFICATIONS OF STUDENTS AND GRADUATES

Table 12 shows the students and graduates of the last six years grouped according to their classification by the Council on Medical Education and Hospitals Note that during the eight years the *percentage* of students enrolled in Class A colleges has increased from 65 4 to 90 2, and that for the last four years also the total numbers of students in attendance at these schools has increased from 11,317 to 12,610 Note, on the other hand, both the numbers and the percentages of students enrolled in Class B and Class C colleges have been reduced The percentage of students in Class B colleges has been reduced from 24 4 to 4 1 and in Class C colleges from 10.2 to 4.2 Of graduates also, the percentage in Class A colleges shows an increase, while in Class B and Class C colleges there has been a decrease The reduction in the total number of students and graduates, therefore has been largely at the expense of the lower grade colleges while the numbers of students and graduates in the higher grade colleges are increasing

HINTS TO PROSPECTIVE MEDICAL STUDENTS

The student who is contemplating the study of medicine should read with care the instructions entitled "Choice of a Medical School" beginning on page 391 The selection of the school in which he is to obtain his

TABLE 11—MEDICAL COLLEGES STUDENTS AND GRADUATES BY STATES

State	Colleges		Students		Graduates		Graduates with B S or A B
	Total	Class C	Men	Women	Men	Women	
Alabama	1		51		10		2
Arkansas	1		31		6		
California	3		488	70	77	13	48
Colorado	1		63	6	17		4
Connecticut	1		83	5	17	2	19
Dist of Columbia	3		389	8	66	1	26
Georgia	2		238		43		6
Illinois	6	1	1 578	112	309	12	224
Indiana	1		221	13	46	2	48
Iowa	1		244	6	52	1	25
Kansas	1		126	7	20	3	14
Kentucky	1		126	6	22	3	6
Louisiana	1		311	14	81		24
Maine	1		43		10		7
Maryland	3		573	61	140	12	93
Massachusetts	5	2	1 005	50	196	19	114
Michigan	3		536	34	118	5	4
Minnesota	1		303	15	60		30
Mississippi	1		49	2			
Missouri	6	3	808	19	221	7	39
Nebraska	2		272	11	63	2	40
New Hampshire	1		21				
New York	9		2 024	136	519	23	168
North Carolina	2		104	3			
North Dakota	1		29	2			
Ohio	5		636	32	143	5	90
Oklahoma	1		80	6	14	1	10
Oregon	1		92	11	13	1	5
Pennsylvania	6	1	1,333	123	384	15	120
South Carolina	1		62	3	14		5
South Dakota	1		29	1			
Tennessee	4	1	362	5	83	1	26
Texas	2		338	22	95	5	30
Utah	1		35	1			
Vermont	1		103		22		
Virginia	2		234	6	50	1	19
West Virginia	1		53	2			
Wisconsin	2		225	19	2		2
Totals	85	8	13 271	817	2 913	131	1 321

TABLE 12—STUDENTS AND GRADUATES ACCORDING TO CLASSIFICATION

Year	Students						Graduates					
	Colleges Rated in Class						Colleges Rated in Class					
	A	%	B	%	C	%	A	%	B	%	C	%
1913	11 122	65 4	4 158	24 4	1 730	10 2	2 529	63.8	1 050	26 4	395	9 8
1914	12 306	74 7	2,838	17 2	1 328	8 1	2 666	73 1	686	19 1	282	7 8
1915	11 314	76 0	2 668	17.9	909	6 1	2 670	74 4	688	19 4	219	6 2
1916	11 162	79 6	2 057	14 9	773	5 5	2 470	74 7	695	19.8	193	5 5
1917	11 317	82 9	1 761	12 8	686	5 0	2 377	76 3	648	20 7	134	4 2
1918	11 572	84 5	1 488	10 9	600	4 5	2 204	75.8	399	14 9	247	9 2
1919	11 466	87 9	1 087	8 3	500	3 8	2 20	83 6	268	10 1	168	6 3
1920	12 610	89 6	650	4 8	798	5 6	2 690	88 4	152	5 0	205	6 6

medical training is a matter of extreme importance and should be considered by the student with special care He should note the standards of premedical education which are given on page 393, he should note the subjects required by the individual medical schools which, if different from those outlined by the Council on Medical Education and Hospitals will be found in the descriptive statements of those colleges appearing on pages 398 to 408 A careful review of the material published this week will be a great service to such students

HOSPITALS FURNISHING ACCEPTABLE INTERNSHIPS

On pages 409 to 415 is published this year a list of hospitals which, after careful investigation, have been considered in position to furnish acceptable internships Although not previously published in THE JOURNAL, this list has already passed through several revisions The information from the hospitals has become more and more complete so that the lists are also more reliable

The present list includes 469 general hospitals, providing a total of 2,960 internships Included in the list, also, are 25 state and other hospitals for the insane which provide places for graduates who may desire to obtain special training in nervous and mental diseases There is also a list of 99 special hospitals providing internships for 388 students It is usual for those seeking internships in state or special hospitals to have first completed an internship in a general hospital The 469 general hospitals listed have a total of 103,997 beds The state hospitals have 41,722, and the special hospitals have 215,443, making a grand total of 361,162

This list also shows in the last column the hospitals which have nurses' training schools The fact that these institutions are approved for interns indicates that they also are fairly provided with nurses, which would indicate that they are also worthy of approval from the standpoint of nursing instruction

GRADUATE MEDICAL EDUCATION

The facilities for graduate medical instruction in the United States are set forth on the next few pages Not only are the separate graduate medical schools given, but also the opportunities available in undergraduate medical schools In the latter, the courses vary somewhat from year to year but the outlines given indicate the variety and extent of such work It is hoped that by the publication each year of these data opportunities in undergraduate schools may be enlarged and a greater use be made of the abundance of clinical material in this country The majority of undergraduate medical schools are now on a par with those in other leading countries, their future development need not be hindered by providing also for the giving of graduate courses

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GRADUATE COURSES IN PUBLIC HEALTH

Graduate courses in public health have been established in connection with eleven medical schools, the first of which was at the University of Pennsylvania in 1909, the latest is that in connection with the medical department of the Johns Hopkins University which began its course in 1918 Two institutions, the University of Colorado and Tulane University, suspended their courses in 1918 Five of the schools have courses leading to the degree of Doctor of Public Health (Dr P H) after a two-year course The University of California offers the degree of Graduate in Public Health (Gr P H) after a two-year course instead of the degree of Dr P H The degree of Certified Sanitarian (C S) after a one-year course is offered by the University of Pennsylvania to graduates of colleges of arts and sciences The degree of Master of Public Health (M P H) is offered after a one-year course by the Detroit College of Medicine and Surgery and the University of Wisconsin Medical School The Master in Arts in Public Health [M A (P H)] is offered by the University of California Medical School, and the Master in Science in Public Health [M S (P H)] by the University of Michigan The courses offered by the eight schools of public health are as follows

THE UNIVERSITY OF CALIFORNIA Courses began in 1915 number of instructors, 20 three courses leading to degree of Gr P H (a) a four year course covering three years in the college of letters and science and one year in the medical school (b) a two year course covering one year in the college of letters and science and one year in the medical school for graduates of the college of civil engineering who have completed the work in sanitary engineering and (c) a course of one and a half years including one year in the college of letters and science and a half year in the medical school for students who have completed three and a half years of the medical course Completion of this third course gives the degrees of M D and Gr P H The University of California also offers a one year course to graduates in arts or sciences for the degree of Master in Arts in Public Health [M A (P H)] Fees are $150 each year A thesis is required for the degree The course extends from August to May Students 1919 1920 16 graduates 10

JOHNS HOPKINS MEDICAL SCHOOL The School of Hygiene and Public Health was opened in October 1918 There are 12 professors and 37 lecturers associates and instructors a total of 49 Four courses are offered (a) A two year course leading to the degree of Dr P H requiring for admission a bachelor's degree and a degree in medicine The degree of M D and the degree of Dr P H may be obtained in a combined course of five years A thesis is required for graduation (b) A three year course leading to the degree of Doctor of Science in Hygiene requiring for admission a bachelor's degree and adequate training in physics chemistry biology and the medical sciences anatomy physiology and pathology A written and oral examination and a dissertation embodying the results of an independent investigation are required for graduation (c) A two year course leading to the degree of Bachelor of Science in Hygiene the course consisting of combined work in the medical school and the School of Hygiene and Public Health For admission the applicant must have completed at least two years of work in an approved college and have studied courses in physics biology inorganic and organic chemistry (d) A one year course leading to a certificate in public health is also offered to graduates of approved medical schools or graduates in arts or sciences who present evidence of satisfactory training in the physical and medical sciences The fees charged are $250 per year Courses for special students are $50 per trimester Altogether 84 students were enrolled during 1919 1920 including 30 who were candidates for degrees The course extends from September 28 to June 21

MEDICAL SCHOOL OF HARVARD UNIVERSITY The School of Public Health was opened in 1910 there are 40 instructors A one year course is offered leading to a certificate in public health For admission the applicant must have completed two years of work in a recognized medical school or have received a bachelor's degree from an approved college or technical school or have had special experience in public health work In any instance he must show evidence of having completed satisfactory courses in physics chemistry and biology and modern languages and the fundamental medical sciences Although not a prerequisite all candidates are advised to obtain a medical degree before specializing in public health work Fees are $250 per year Course extends from October to June

DETROIT COLLEGE OF MEDICINE AND SURGERY The course began in 1913 with ten instructors A one year course leading to the degree of Master of Public Health (M P H) is offered to graduates of approved medical schools The work is conducted at the college the Detroit City Board of Health and the Municipal Contagious Hospital It includes sanitary engineering laboratory clinical and field work Fees are $100 per year No thesis required No students enrolled during the past session The course extends from September to June

THE UNIVERSITY OF MICHIGAN MEDICAL SCHOOL The graduate courses in public health were established in the University of Michigan in 1913 The number of instructors is approximately 10 Two courses are offered—one to graduates in arts and sciences or medicine extending from one to two years leading to the degree of Master in Science and Public Health the other a course of from two to three years in length for graduates in arts or sciences and medicine leading to the degree of Doctor of Public Health For residents of Michigan the fees consist of $10 matriculation and $80 for men students and $76 for women for nonresidents of Michigan matriculation $25 and an annual fee of $105 for men and $101 for women A thesis is required for the degree of Dr P H There is a summer session but the regular session extends from October 1 to July 1 In 1919 1920 4 students were enrolled

UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE The graduate course in public health began in 1916 with approximately 30 teachers Two courses are offered—a two years course leading to the degree of Doctor of Public Health for graduates of approved medical schools and a correspondence course of indefinite length especially adapted for health officers The tuition for the Dr P H course is $200 for the first year and $25 for the second The fee for either the correspondence or 26 days resident course is $30 including the matriculation fee For the correspondence course the last week must be spent in residence There were 145 health officers reported as taking the correspondence course during the year The courses run from October to June

THE UNIVERSITY OF PENNSYLVANIA The graduate courses in public hygiene began in 1906 there are 19 instructors two courses are offered —a two years course for graduates in medicine leading to the degree of Dr P H and a one year course for graduates of arts or science leading to the degree of Certified Sanitarian A thesis is required for graduation The fees are $250 per year There were 8 students during 1919 1920 4 graduates The course extends from October to June

THE UNIVERSITY OF WISCONSIN Graduate courses in public health began in 1910 There are eight teachers Two courses are offered— a one year course for graduates in medicine leading to the degree of Master of Public Health (M P H) the other a two year course for physicians leading to the degree of Doctor of Public Health Fees are $50 per year for residents of Wisconsin and $170 for nonresidents A thesis is required for graduation Address inquiries to Miss Ruth Hames Secretary Medical School

Uniform Requirements in 1920-21

On February 28 1919, at a conference of representatives from a number of universities in the country held at New Haven Conn the following regulations were adopted to take effect with the Session 1920-21

1 That the degree of Doctor of Public Hygiene (for which the abbreviation shall be Dr P H) for graduates in medicine shall be awarded after two years of work done under academic direction, of which one year at least shall be in residence, and that the requirements for the degree shall include class work, practical field work and an essay based on individual study of a particular problem

2 That the degree Doctor of Philosophy or Doctor of Science in Public Hygiene shall be conferred on students who hold the bachelor's degree from a college or technical school of recognized standing and have satisfactorily completed not less than three years of graduate study It is understood that this degree is based on a knowledge of physics, chemistry, biology anatomy physiology, physiologic chemistry, pathology and bacteriology

GRADUATE COURSES IN MEDICAL SCHOOLS

Special correspondence with medical schools shows that there are many opportunities for graduate study which physicians have not been able to take advantage of through the lack of knowledge in regard to them The following list has been prepared to correct this deficiency More complete information can be obtained by correspondence with the medical school concerned

CALIFORNIA

LELAND STANFORD JUNIOR UNIVERSITY SCHOOL OF MEDICINE San Francisco —Graduate courses are open to physicians (a) Mid-day clinics 11 30 to 12 30 daily covering medicine medical specialties surgical specialties obstetrics gynecology and pathologic conferences free of charge (b) Clinical examinations at the Polyclinic of the San Francisco Hospital On Thursdays beginning 9 a m the work is in surgery and the surgical specialties on Fridays beginning 9 a m medicine and the medical specialties These courses are free of charge (c) Assistantships in clinics and laboratories A physician may be assigned to some research problem or receive regular instruction from a member of the staff For the latter an appropriate fee is charged and a nominal fee also for materials used During the last five years an average of 28 physicians each year has occupied these assistantships

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL —Resident positions are open to properly qualified medical graduates as follows In the University Hospital A resident position in general medicine and four assistant residentships one each in general medicine and dermatology in neuro psychiatry and infirmary in out patient department in medical research Besides a residentship in surgery there are five assistant residentships one each in general surgery urology orthopedic surgery ophthalmology ortorhinolaryngology out patient department and surgical pathology There are a residentship and two assistant residentships each in pediatrics and in obstetrics and gynecology There is one residentship each in pathology and in biochemistry and clinical laboratories In the San Francisco Hospital as house officers there are two positions in medicine and tuberculosis two in surgery one in pediatrics and isolation and one in obstetrics and gynecology Special courses to physicians and advanced students are open in the departments of anatomy (at Berkeley) neuro surgery pathology and research medicine An announcement regarding public health work appears in another column

COLORADO

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE Boulder Denver — During the present summer courses for physicians were given in bacteriology biochemistry blood chemistry anatomy histology embryology clinical laboratory technic advanced pathology and ophthalmology The session extended from June 14 to August 28 divided in two terms Physicians may register for either term or for the entire quarter

ILLINOIS

RUSH MEDICAL COLLEGE Chicago —The following courses are offered for physicians (a) Operative surgery on the cadaver extending over four weeks (b) A course on tuberculosis (c) Special course for three or four physicians who are willing to spend a full year in diseases of the ear nose and throat (d) Attendance at arena clinics for which a visitor's ticket for a week is issued—registration not limited (e) Opportunities for a few physicians for investigative work in pathology Fees $25 for each major's work or $75 for a full quarter

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE Chicago — The summer quarter is devoted to courses for physicians and during the balance of the year a large number of fellowships are available in courses leading to the degrees of Master of Science and Doctor of Philosophy A well organized course in ophthalmology has been established Special opportunities for individual research work in anatomy pharmacology and pathology and bacteriology were offered during the present summer quarter

MICHAEL REESE HOSPITAL Chicago —There are five Fellowships one each respectively in medicine surgery and gynecology eye ear nose and throat pediatrics and genito urinary diseases The five Fellowships are open to physicians who have completed internships in acceptable hospitals preference is given to former interns of this hospital The work includes daily service in dispensary clinics and a limited number of visits to the sick in their homes The time devoted is about six half days per week These Fellowships provide excellent clinical training and offer opportunity also for special research work The Fellowships include an annual stipend of $900 each

INDIANA

INDIANA UNIVERSITY SCHOOL OF MEDICINE Indianapolis — Opportunities for any physicians resident in the state who make application During the present summer courses on immunity and on disease production and resistance were offered Other courses will be arranged as requested so far as facilities will allow

IOWA

STATE UNIVERSITY OF IOWA COLLEGE OF MEDICINE Iowa City — During the present summer a four weeks review course limited to 14 physicians was offered There are opportunities for physicians to act as clinical assistants research workers hospital chemists etc in the various departments of the medical school Special opportunities are always open for physicians with research ability

MARYLAND

JOHNS HOPKINS UNIVERSITY MEDICAL DEPARTMENT Baltimore — During the present summer a six weeks course in medical diagnosis was offered limited to twenty physician The course consisted in ward round lectures clinics group courses physical diagnosis laboratory work in clinical microscopy and group clinics in the special study of syphilis Provision can be made for similar classes in the other main departments of the medical college Opportunities for advanced work open to a certain number of qualified men The work is arranged for by personal communication between the applicants and the heads of the various departments Special opportunities for long time service in the hospital

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE Baltimore — Courses are open for physicians in operative surgery anatomy obstetrics genito urinary diseases roentgen ray and clinical laboratory work Arrangements made by personal communication

MICHIGAN

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL Ann Arbor — Special courses open for any qualified physicians in laboratory or clinical work regional anatomy as a preparation for medical specialties also special methods and investigative work in bacteriology Extended courses also offered leading to the degrees of Master of Science Doctor of Philosophy and Doctor of Science Summer courses are open for advanced work in research anatomy and bacteriology

MISSOURI

WASHINGTON UNIVERSITY MEDICAL SCHOOL St Louis —A series of courses are open for physicians in the Barnes and City Hospitals and in the outpatient department and clinical laboratory of the medical college The physician may devote all or a part of his time in the wards dispensary or in the laboratory The courses extend over four weeks during the summer session Maximum fees are $50 for a half day or $100 for the entire day During the present summer courses were offered in physical and differential diagnosis clinical chemistry and microscopy tuberculosis dermatology and syphilis diseases of metabolism applied immunology mental dificiency and cardiovascular renal diseases In several of these subjects the courses included clinical subjects lectures ward round instruction in diagnostic methods application of laboratory tests and in mental diseases interpretation of intelligence tests Special courses are given in pediatrics Courses arranged by individual communication

NEBRASKA

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE Omaha —Opportunities for a few physicians to do graduate work in the departments of anatomy physiology biochemistry pathology and bacteriology A few opportunities open also in the clinical department

NEW YORK

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS New York City — Courses for physicians are being arranged which will become available in the fall of 1920

LONG ISLAND COLLEGE HOSPITAL Brooklyn —Positions comparable to fellowships open for physicians who have completed internships These are in several clinical departments of the hospital Courses open in fundamental branches courses also open in embryology neuro anatomy histology bacteriology biochemistry physiology preventive medicine and hygiene Also opportunities for research work in biochemistry and physiology Special courses on animal locomotion heart and circulation and functional diseases Opportunities also for physicians to do advanced work Arrangements made by personal communication

UNIVERSITY AND BELLEVUE HOSPITAL COLLEGE OF MEDICINE —Various graduate courses are open for physicians as follows Research courses in anatomy embryology chemistry physiology pharmacology and therapeutics as well as special courses in pathology bacteriology and surgery Clinical courses occupying about six weeks each are also offered in medicine and physical diagnosis clinical and operative gynecology genito urinary diseases laryngology ophthalmology pediatrics and dermatology

OHIO

WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE Cleveland — The summer session is devoted especially to courses for physicians Courses also available during the remainder of the year especially for physicians desiring advanced research work either in clinical or laboratory subject Arrangements by personal communication

VIRGINIA

MEDICAL COLLEGE OF VIRGINIA Richmond —Opportunities open for a few physicians to take courses in the combined laboratories of the college of the State Board of Health and of the Richmond City Board of Health

ONTARIO

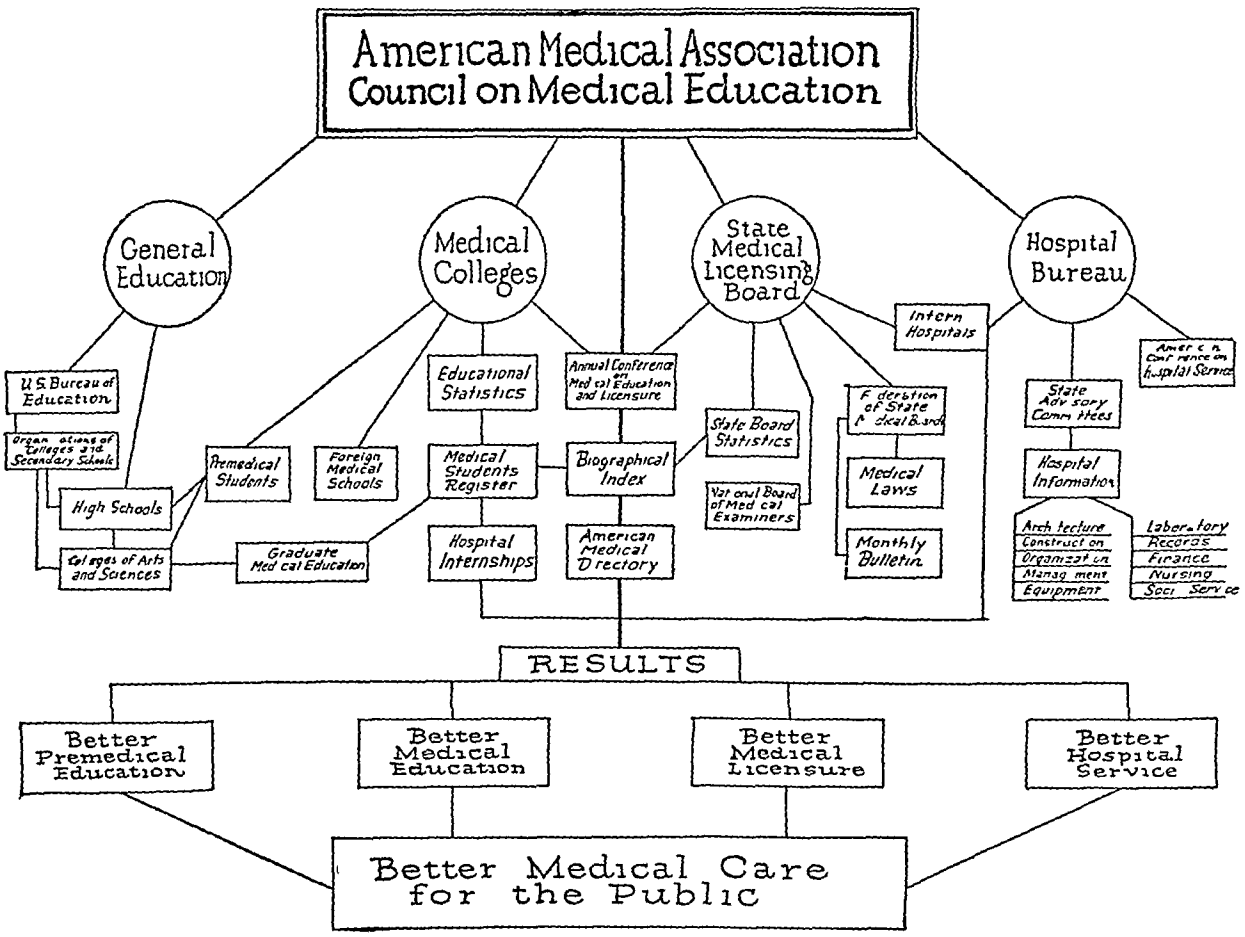
UNIVERSITY OF TORONTO FACULTY OF MEDICINE, Toronto —Graduate courses in clinical and laboratory work are available to physicians on application During the present summer session a special course in pediatrics was offered Also a series of lectures were prepared and given before medical societies or other groups of physicians in the country district The courses dealt with biochemistry [illegible] medicine pediatrics obstetrics and gynecology [illegible] pharmacology physiology and respiration of the [illegible]

GRADUATE MEDICAL SCHOOLS

There are now eighteen graduate medical schools in the United States These are commonly referred to as post-graduate medical schools Of these institutions, seven are connected with universities in which the graduate teaching is, or will be, as thoroughly and scientifically given as are the courses of the undergraduate medical school The universities having graduate schools are the Universities of Alabama, California, Tulane, Harvard, Minnesota Columbia and Pennsylvania The University of Chicago has received a generous endowment preparatory to the establishing of a large graduate school Active steps toward this end will be taken in the the early future Following is the complete list of the graduate medical schools

ALABAMA

GRADUATE SCHOOL OF MEDICINE OF THE UNIVERSITY OF ALABAMA Ave F and 20th St Birmingham Organized 1915 Formerly the Birmingham Medical College Suspended in 1918 reopens in fall of 1920 The dean is Dr Lewis C Morris, Empire Bldg



Reproduction of a chart from the exhibit of the Council on Medical Education and Hospitals at the session of the American Medical Association in New Orleans April 26 30 It shows the many ramifications of the work of the Council on Medical Education by which the latter has come into intimate touch with other departments of education with medical licensure and with hospitals

CALIFORNIA

SAN FRANCISCO POLYCLINIC AND POST GRADUATE SCHOOL 1535 Jackson St San Francisco The dean is Dr H D Arcy Power

GRADUATE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CALIFORNIA Buena Vista and Alpine Sts Los Angeles Organized 1914 Formerly the University of Southern California College of Medicine The dean is Dr George H Kress

ILLINOIS

CHICAGO POLICLINIC 219 221 W Chicago Ave Chicago The secreary is Dr Malcolm L Harris 32 N State St

ILLINOIS POST GRADUATE MEDICAL SCHOOL 1844 W Harrison St Chicago The secretary is Dr James A Clark

POST GRADUATE MEDICAL SCHOOL 2400 Dearborn St Chicago The secretary is Dr Emil Ries 77 E Washington St

CHICAGO EYE EAR NOSE AND THROAT COLLEGE 235 W Washington St Chicago The secretary is Dr John R Hoffman 31 N State St

PROVIDENT HOSPITAL POST GRADUATE SCHOOL 16 W 36th St Chicago For colored physicians The dean is Dr George C Hall

LOUISIANA

NEW ORLEANS POLYCLINIC Post Graduate School of Medicine of the Tulane University of Louisiana Tulane Ave and Liberty St, New Orleans The dean is Dr Charles L Chassaignac

NEW ORLEANS POST GRADUATE SCHOOL OF MEDICINE 135 S Rampart St New Orleans The secretary is Dr Joseph A Danna

MASSACHUSETTS

HARVARD MEDICAL SCHOOL COURSES FOR GRADUATES, 240 Longwood Ave Boston Organized as a separate division of the Medical School 1912 all instruction under the charge of the Faculty of Medicine Instruction is given throughout the year The officer in charge is the assistant dean Alexander S Begg M D

MINNESOTA

UNIVERSITY OF MINNESOTA GRADUATE SCHOOL OF MEDICINE Minneapolis Organized 1914 In 1915, the resources and facilities of the Mayo Foundation were added with the staff clinics laboratories library and records at Rochester Minn A nine months course of advanced work is offered in the science departments giving the fundamental training essential in ophthalmology and otolaryngology will begin Sept 29 1920 It will include anatomy embryology and histology of the sense organs and of the head region, physiologic optics physiology of the special senses and of speech pathology and bacteriology as applied to the eye ear nose and throat The course will include lectures demonstrations quizzes and clinical work in the outpatient department The course is limited to ten students There are also two teaching fellowships each available in internal medicine surgery obstetrics ophthalmology and otolaryngology pediatrics, and mental and nervous diseases Five others are available in the laboratory sciences and eighty six others are available under the Mayo Foundation Courses in various specialties leading to higher degrees in medicine (M A M S PH D) Instruction throughout the year The dean is Guy Stanton Ford PH D Minneapolis

NEW YORK

The New York Association for Medical Education is organized to collect information regarding available graduate medical instruction to work for the improvement of existing courses and the establishment and development of new opportunities for advanced study to bring about an affiliation between medical schools and hospitals whose facilities have not before been utilized for teaching purposes and to serve as a bureau of information and assistance to prospective students The executive offices are at the Academy of Medicine Bldg 17 W 43d St New York The graduate schools are as follows

NEW YORK POST GRADUATE MEDICAL SCHOOL 2d Ave and 20th St New York City The secretary is Dr J Bentley Squier

NEW YORK POLYCLINIC MEDICAL SCHOOL 341 51 W 50th St, New York City Is to be taken over and the work developed by Columbia University The president is Dr John A Wyeth 341 W 50th St

MANHATTAN EYE EAR AND THROAT HOSPITAL AND MEDICAL SCHOOL 210 E 64th St New York City The secretary is Dr Samuel J Kopetzky

SCHOOL OF OPHTHALMOLOGY AND OTOLOGY 13th St and 2d Ave New York City The secretary is Dr George S Rixon 40 E 41st St

COLLEGE OF THE NEW YORK OPHTHALMIC HOSPITAL 23d St and Third Ave New York City The secretary is Dr W C McKnight 13 Central Park West

PENNSYLVANIA

GRADUATE SCHOOL OF MEDICINE OF THE UNIVERSITY OF PENNSYLVANIA Philadelphia Organized 1916 by a merger with the University of the Medico Chirurgical College of Philadelphia The Philadelphia Polyclinic was merged in 1918 The faculty includes about 230 teachers Courses extending over from four to twelve months in medicine pediatrics neurology dermatology syphilology roentgenology surgery gynecology obstetrics orthopedics urology proctology ophthalmology otolaryngology and the medical sciences Fees Four month courses $200 eight month $400 twelve month $600 Special schedules (few only) special fees The dean is Dr George H Meeker

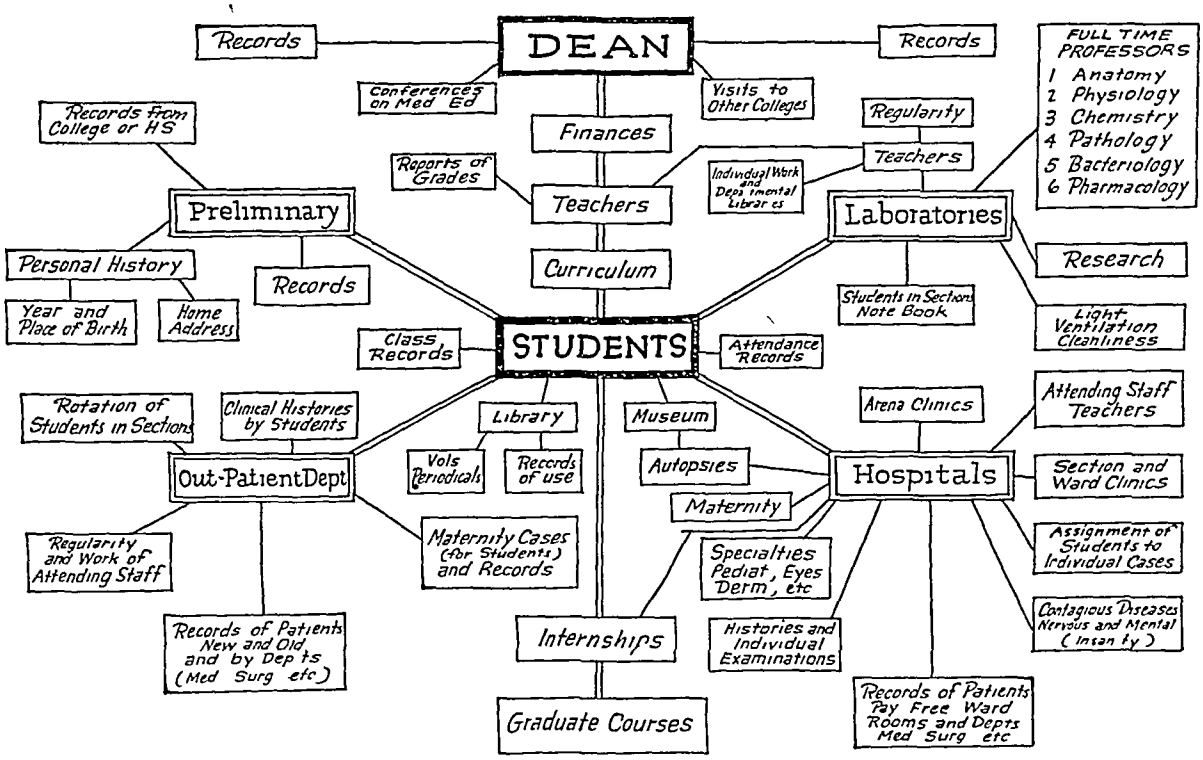
CHOICE OF A MEDICAL SCHOOL

For the student who has decided to study medicine the first and most important step is the selection of a medical school, a false step here may handicap him for life thirty-three states he may later miss a great opportunity by being thus debarred He should know also that all the better medical colleges now require this higher preliminary education since—most important of all—the student needs it to study and understand the difficult and complex subjects of the modern medical course Lower entrance requirements by any medical college therefore should be regarded as an indication that the medical training furnished will be correspondingly low

BETTER MEDICAL TRAINING ESSENTIAL

Medicine is now based on scientific knowledge, without which the physician will be seriously handicapped Adequate instruction in the recognition, treatment and prevention of diseases can be given only in acceptable (Class A) medical schools, which have expert teachers well-equipped laboratories and dispensaries and hospitals where the student can study patients having all varieties of sickness and injuries

A MODERN MEDICAL SCHOOL



Reproduction of a chart from the exhibit of the Council on Medical Education and Hospitals at the session of the American Medical Association in New Orleans April 26 30 It gives some idea of the intricate mechanism of a modern medical school it shows the many inter relations of the medical school with its laboratories hospitals and dispensaries and the many lines of work with which the dean or executive officer of the medical school needs to keep in intimate touch

Before choosing a medical school the student should obtain information in regard to its requirements of preliminary education, the character of its teaching its classification, the tuition fees charged and—most important—whether or not its diplomas are recognized by all state medical boards

ADEQUATE ENTRANCE QUALIFICATIONS

The student should make sure that his preliminary education is sufficient to meet the requirements of the state licensing boards of the country He should know that at the present time thirty-four[1] (69 4 per cent) state licensing boards require that before beginning the study of medicine the student must have completed *two years* of work in an approved college of liberal arts, in addition to a four-year high school education Although he may not at first seek a license in one of these

IS THE MEDICAL COLLEGE RECOGNIZED?

Formerly a course in almost any medical college furnished an adequate qualification for the license to practice medicine in all states At present however, state licensing boards are refusing to recognize medical colleges which are deemed not properly equipped to furnish a training in modern medicine The student should know that the diplomas granted by some medical schools are not recognized in as high as from 37 to 2 states[2] A diploma from one of these medical colleges therefore would not qualify him to practice medicine in any of those states The student must make sure not only that he has adequate preliminary education but also that he has secured his medical training in a college recognized in all states

CONSIDER CAREFULLY THE COST

The student of course is bound to consider the expense of his medical training and herein lies the basis

1 These states may be noted in Table L THE JOURNAL April 17 1920 p 1099

2 The courses required and recommended in the high school and two year premedical college courses are set forth on page 393

3 See Table D THE JOURNAL April 17 1920 p 10

some inferior colleges which profess deep interest in "the poor boy" endeavor to attract students If the training is not thorough and up to date, the student should know that the training furnished will be a mighty poor investment at any price As a matter of fact, and as may be noted in Table 1, on page 380, the total fees charged by some of the best (Class A) medical colleges, particularly the medical departments of some state universities, are lower than those charged by some of the poorly equipped (Class C) institutions which are not recognized by the majority of state licensing boards

In the same length of time therefore, and often for even lower fees than he would pay in a poorly equipped institution, the student may acquire his education in one of the best medical colleges of the land Although some of the better schools do charge higher fees they spend on each student per year several times the amount of money that the student pays for tuition This they are able to do because of their larger incomes from endowments or state aid It would be poor economy, therefore, for a student to enter a low-grade college whose diplomas are not recognized in the majority of states, when for a few additional dollars each year he can enter a thoroughly equipped institution, receive a far better medical training and obtain a diploma recognized everywhere Even if one should be required to work one s way through in whole or in part the opportunities for doing so are usually more abundant in the better than in the lower standard colleges As a rule however, the student who works his way through college appreciates not only the value of money but also the value of the medical course he is getting and many such students are found in the high-grade medical colleges There are now over 300 free scholarships as well as generous loan funds, available for deserving students in the better medical colleges [4]

GET RELIABLE INFORMATION

How may the student secure reliable information on these matters? Some medical colleges advertise extensively in newspapers and popular magazines and through announcements and circulars containing exaggerated if not misleading, statements *Of course, such advertisements do not show the more important fact that their diplomas are reported as not recognized in from 37 to 42 states* It is essential therefore, that the student should secure information from impartial and reliable sources so as to make sure he is not enticed into a low-grade institution To inform himself thoroughly therefore, he should not depend alone on the announcements of the medical schools After extensive and repeated investigations the medical schools of the country have been rated by the Council in three classes, namely, A, B and C, according to their degree of excellence [5] If the student is otherwise in doubt, he will not make a mistake by choosing one of the colleges in Class A By so doing he will not only obtain a better training in medicine but also after graduation, will be eligible to secure a license in any state he may choose

A STRONG AND SURE FOUNDATION

In his preliminary and medical education the student should bear in mind that he is *laying the foundation for the rest of his life* If he finds that additional preliminary education is needed to enter one of the better medical colleges, he should consider the time well spent since he is all the more sure of having laid a solid foundation Although all professions in this country are crowded there is always room for the thoroughly competent On the other hand the student will be disappointed if because of lower entrance requirements or other allurements he is induced to get his training in a poorly equipped college and finds after graduation that his diploma is not recognized in many states, and that otherwise he is handicapped for life

AVOID CULTS AND FADS

Among the worst pitfalls confronting the present day student is the number of institutions representing various unscientific or pseudo-scientific cults, such as osteopathy, chiropractic, etc, which profess to train those who desire to treat human ailments Medical knowledge is now based on scientific facts and there is no longer room for the differences of opinion which in earlier days were justifiable No one can afford to confine his training to the narrow theories held by any cult but should obtain a thorough all-round scientific training by which he will be prepared to care intelligently for any form of human ailment or disorder which presents itself and to apply skilfully any form of treatment which each particular patient may require One must have a thorough training in *all the fundamentals of medicine* before he can intelligently employ any particular method of treatment, even as the member of an orchestra must have a thorough training in all the fundamentals of music before he can play any particular instrument in that orchestra One must first become a good general practitioner of medicine, then if he wishes to specialize along any particular line he will naturally secure further training for such specialty

4 A list of colleges which provide scholarships and loan funds will be found on page 398

5 See classification on page 395

STANDARDS OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION

SCHEDULE FOR GRADING MEDICAL SCHOOLS

Schools are rated on a civil service basis on a scale of 100 points Data relating to each school will be grouped under four general heads in such manner that the groups will have as nearly equal importance as possible, each group being allowed a possible 25 points The revised schedule under the four general heads is as follows

1 FACULTY —Number qualifications (standing in profession evidences of special training teaching experience etc), research ability efficiency proportion of time to teaching proportion to student enrolment organization of departments completeness of department staffs including dieners employees etc, esprit de corps

2 PRODUCT —Qualifications of students admitted student organizations esprit de corps records of graduates before state and national boards research articles written excellence as teachers membership in medical organizations reputation in profession other evidences of character of training reputation of college

3 ADMINISTRATION AND SUPERVISION —Curriculum grade of course sequence of subjects arrangement of subjects in class roster and by departments in annual announcements completeness of curriculum Division of students in sections ward classes etc Efficiency of routine Faculty meetings Supervision of entrance requirements of teaching in college and in dispensary and hospital Records entrance requirements class grades promotion of students dispensary and hospital records attendance of teachers and students conditions etc completeness Budget use made of funds proportion to salaries etc

4 BUILDINGS AND EQUIPMENT —College building including class rooms laboratories library museum storage rooms animal houses and their contents Dispensary rooms used for accessibility number and regularity of staff quantity and use of clinical material character of histories and records Hospital accessibility ownership or control quantity variety and use of clinical material Other equipment Apparatus Funds in addition to students fees, endowed chairs fellowships etc

Colleges obtaining 70 per cent or above are rated in Class A, those obtaining from 50 to 70 per cent in Class B, and those obtaining 50 per cent or less in Class C

MEANING OF CLASSES A, B AND C

Class A Colleges are those which are acceptable, Class B those which under their present organization, give promise of being made acceptable by general improvements, and Class C those

(*a*) Which require a complete reorganization to make them acceptable

(*b*) Which do not keep satisfactory records of their students in regard to entrance requirements, attendance, grades in courses division into classes and reasons for promotion

(*c*) Which do not enforce their requirements in regard to admission (including those admitted to advanced standing), promotion and graduation

(*d*) Which give the major portion of their instruction after 4 o clock in the afternoon

(*e*) Which are privately owned and conducted for profit

(*f*) Which for other specific reasons are not eligible for inclusion in Class B

ESSENTIALS OF AN ACCEPTABLE MEDICAL COLLEGE

Revised to Aug 1, 1920

1 The minimum requirement for admission to an acceptable medical college is a four-year high school education or its full equivalent and two years of work in a college of arts and sciences approved by the Council on Medical Education and Hospitals, as follows

1 High School Requirements

(*a*) For admission to the two-year premedical college course, students shall have completed a four-year course of at least fifteen units in a standard accredited high school or other institution of standard secondary school grade or have the equivalent as demonstrated by examinations conducted by the College Entrance Examination Board or by the authorized examiner of a standard college or university approved by the Council on Medical Education and Hospitals. A detailed statement of attendance at the secondary school and a transcript of the student's work, should be kept on file by the college authorities. This evidence of actual attendance at the secondary schools should be obtained no matter whether the student is admitted to the freshman or to higher classes.

(*b*) Credits for admission to the premedical college course may be granted for the subjects shown in the following list and for any other subject counted by a standard accredited high school as a part of the requirements for its diploma provided that at least eleven units must be offered in Groups I-V.

SCHEDULE OF SUBJECTS REQUIRED OR ACCEPTED FOR ENTRANCE TO THE PREMEDICAL COLLEGE COURSE

Subjects	Units*	Required
GROUP I ENGLISH—		
Literature and composition	3 4	3
GROUP II FOREIGN LANGUAGES—		
Latin	1 4	
Greek	1 3	
French or German	1 4	2†
Other foreign languages	1-4	
GROUP III MATHEMATICS—		
Elementary algebra	1	*
Advanced algebra	½ 1	
Plane geometry	1	1
Solid geometry	½	
Trigonometry	½	
GROUP IV HISTORY—		
Ancient history	½ 1	
Medieval and modern history	½ 1	
English history	½ 1	1
American history	½ 1	
Civil government	½ 1	
GROUP V SCIENCE—		
Botany	½ 1	
Zoology	½ 1	
Chemistry	1	
Physics	1	
Physiography	½ 1	
Physiology	½ 1	
Astronomy	½	
Geology	½ 1	
GROUP VI MISCELLANEOUS—		
Agriculture	1 2	
Bookkeeping	½ 1	
Business law	½	
Commercial geography	½ 1	
Domestic science	1 2	
Drawing freehand and mechanical	½ 2	
Economics and economic history	½ 1	
Manual training	1 2	
Music Appreciation or harmony	1 2	

* A unit is the credit value of at least thirty six weeks work of four or five recitation periods per week each recitation period to be not less than forty minutes. In other words a unit represents a year's study in any subject in a secondary chool constituting approximately a quarter of a full year's work. A satisfactory year's work in any subject cannot be accomplished under ordinary circumstances in less than 120 sixty minute hours or their equivalent.

† Both of the required units of foreign language must be of the same language but the two units may be presented in any one of the languages specified.

Of the fifteen units of high school work eight units are required as indicated in the foregoing chedule the balance may be made up from any of the other subjects in the chedule

2 Premedical College Course

(*c*) The minimum requirement for admission to acceptable medical schools, in addition to the high school work specified above, is sixty semester hours of collegiate work in a college approved[7] by the Council on Medical Education and Hospitals. The subjects included in the two years of college work should be in accordance with the following schedule

SCHEDULE OF SUBJECTS OF THE TWO YEAR PREMEDICAL COLLEGE COURSE

Sixty Semester Hours* Required	Semester Hours
Required Subjects	
Chemistry (a)	12
Physics (b)	8
Biology (c)	8
English composition and literature (d)	6
Other non cience subjects (e)	12
Subjects Strongly Urged	
A modern foreign language (f)	6 12
Advanced botany or advanced zoology	3 6
Psychology	3 6
Advanced mathematics including algebra and trigonometry	3 6
Additional courses in chemistry	3 6
Other Suggested Electives	
English (additional) economics history sociology political science logic mathematics Latin Greek drawing	

* A semester hour is the credit value of sixteen weeks work consisting of one lecture or recitation period per week each period to be not less than fifty minutes net at least two hours of laboratory work to be considered as the equivalent of one lecture or recitation period

SUGGESTIONS REGARDING INDIVIDUAL SUBJECTS

(*a*) *Chemistry*—Twelve semester hours required of which at least eight semester hours must be in general inorganic chemistry including four semester hours of laboratory work. In the interpretation of this rule work in qualitative analysis may be counted as general inorganic chemistry. The remaining four semester hours may consist of additional work in general chemistry or of work in analytic or organic chemistry. After Jan 1 1922 organic chemistry will be required.

(*b*) *Physics*—Eight semester hours required, of which at least two must be laboratory work. It is urged that this course be preceded by a course in trigonometry.

(*c*) *Biology*—Eight semester hours required, of which four must consist of laboratory work. The requirement may be satisfied by a course of eight semester hours in either general biology or zoology or by courses of four semester hours each in zoology and botany but not by botany alone.

(*d*) *English Composition and Literature*—The usual introductory college course of six semester hours, or its equivalent is required.

(*e*) *Nonscience Subjects*—Of the sixty semester hours required as the measurement of two years of college work at least eighteen including the six semester hours of English should be in subjects other than the physical, chemical or biologic sciences.

(*f*) *Foreign Language*—A reading knowledge of a modern foreign language is strongly urged. French and German have the closest bearing on modern medical literature. If the reading knowledge in one of these languages is obtained on the basis of high school work, the student is urged to take the other language in his college course. It is not considered advisable however, to spend more than twelve of the required sixty semester hours on foreign languages.

Recognition—This two year premedical course in both quantity and quality must be such as to make it acceptable as the equivalent of the first two years of the course in reputable approved colleges of arts and sciences leading to the degree of Bachelor of Science.

3 Approved Colleges of Arts and Sciences

A tentative list of colleges of arts and sciences approved by the Council on Medical Education and Hospitals has been prepared and will be occasionally revised. By an approved college (of arts and sciences) is meant one whose standing has been vouched for by some standardizing agency in whose methods the Council has confidence. To be recognized a college must have sufficient scientific equipment and maintain laboratories in the premedical sciences. It must have ample endowment to maintain a sufficient corps of teachers. Membership in some national organization or association of colleges will be favorably regarded and in the absence of such membership careful investigation will be made of the causes of exclusion. It must maintain national standards for admis

7 A tentative list of approved colleges may be obtained cation to the American Medical Association enclosing 6 c

sion to its freshman class Undue liberality in the acceptance of certificates from secondary schools unendorsed by approved standardizing agencies will be registered by the Council as a failure to comply with its requirement and the college will be dropped from the approved list No college will be approved by the Council which allows work *in absentia* or by correspondence courses to count toward a baccalaureate degree

PREMEDICAL COURSES IN MEDICAL COLLEGES—JUNIOR COLLEGES

Premedcal college courses given in or by medical schools, by normal schools, or advance years taken in high schools, will not be considered as acceptable unless they have been investigated and approved by some association of colleges and secondary schools or other approved agency having to do with the standardizing of liberal arts colleges and unless they are found to be a full equivalent of the first two years of the course leading to the Bachelor of Science degree

4 The Medical School

ADMINISTRATION OF ENTRANCE REQUIREMENTS

2 The admission of students to the medical school must be in the hands of a responsible committee or examiner whose records shall always be open for inspection Documentary evidence of the student's preliminary education should be obtained and kept on file When the medical school is an integral part of the university, this work usually devolves on the university examiner Unless the university examiner and his records are closely accessible, however some officer at the medical school should obtain and keep on file documentary evidence of each student's preliminary education, including both high school and collegiate work The records should show especially that the required amount of work in the premedical sciences, including laboratory experiments, has been completed

OTHER MEDICAL SCHOOL REQUIREMENTS

3 The college should require that students be in actual attendance in the college *within the first week* of each annual session and thereafter

4 Actual attendance at classes should be insisted on except for good cause, such as for sickness, and no credit should be given for any course where the attendance has been less than 80 per cent of the full time

5 (*a*) Full advanced standing may be granted to students only for work done in other acceptable medical schools and in granting advanced standing there should be no discrimination against the college's full-course students Official verification of the student's previous medical work should be obtained by direct correspondence with the college previously attended and his preliminary qualifications should also be verified and recorded the same as for freshman students (*b*) In *exceptional cases* students who possess the required premedical qualifications and who have completed three or more years of work in Class B medical schools may be given advanced standing but not higher than *entrance* to the third year (junior) class and no credit should be given in any subject except on recommendation of the head of the department teaching that subject (*c*) In *exceptional cases* also students who possess the required premedical qualifications and who have completed three or more years of work in Class C colleges may be given advanced standing but not higher than *entrance* to the second year (sophomore) class and then only after thorough examinations in all first year subjects have been passed

SUPERVISION, EQUIPMENT TEACHERS

6 There should be careful and intelligent supervision of the entire school by the dean or other executive officer who holds and has sufficient authority to carry out fair ideals of medical education as determined by the present day knowledge of medicine

7 There should be a good system of records showing conveniently and in detail the credentials attendance grades and accounts of the students by means of which an exact knowledge can be obtained regarding each student's work Records should also be kept showing readily the attendance of patients at the teaching hospitals and dispensaries, the maternity cases attended by students, and the postmortem cases used in teaching

8 The college curriculum should be fully graded and should cover four sessions of at least thirty-two weeks each, exclusive of time required for matriculation and holidays and at least thirty hours per week of actual work The courses offered in the various subjects should be set forth by departments (anatomy physiology, etc) in the annual announcement, showing for each course its number, subject, content, character (lecture, recitation, laboratory or clinic), length of time when where, and by whom given and the amount of credit allowed The courses for each class should also be clearly set forth in a printed class schedule, for the guidance of the students

(*a*) The college should give two years of work consisting largely of laboratory work in well equipped laboratories of anatomy histology, embryology physiology physiologic chemistry bacteriology pathology, pharmacology therapeutics and clinical diagnosis Present-day medical knowledge makes it essential that these subjects be in charge of full-time, well-trained teachers

(*b*) Two years of clinical work largely in hospitals and dispensaries, with courses in medicine (including physical diagnosis pediatrics nervous and mental diseases), surgery (including surgical anatomy and operative surgery on the cadaver) obstetrics gynecology laryngology, rhinology, ophthalmology otology dermatology, hygiene and medical jurisprudence With the higher entrance requirements time is now available in the latter part of the second year for beginning courses in physical diagnosis and the principles of surgery

(*c*) As soon as conditions warrant, relations should be established with a number of approved hospitals so that a fifth undergraduate year may be required to be spent by the student as an intern under the continued supervision of the medical school

FACULTY

9 (*a*) The college should provide at least *eight expert thoroughly trained professors in the laboratory branches,* salaried so that they may devote their entire time to instruction and to that research without which they cannot well keep up with the rapid progress being made in their subjects[8] For colleges having *sixty students or less* in each class, there should be at least one full-time salaried assistant each in the departments of (1) anatomy (2) physiology (3) pathology and bacteriology and (4) physiologic chemistry and pharmacology There should be also one additional assistant provided in each of these departments for *each additional thirty students enrolled* This represents a low average of the full-time assistants already employed by the acceptable medical colleges

(*b*) The faculty should be made up of graduates of institutions recognized as medical colleges and who have had a training in all departments of medicine Nonmedical men should be selected as teachers in medical schools only under exceptional circumstances and only when medical men of equal special capacity are not available The faculty should be organized each department having its head professor, its associate professor assistant professor, instructor etc each having his particular subjects for the teaching of which he is responsible to the head of the department

CLINICAL FACILITIES AND INSTRUCTION

10 (*a*) The college should own or entirely control a hospital in order that students may come into close and extended contract with patients under the supervision of the attending staff This hospital should be in close proximity to the college and have a daily average (for senior classes of 100 stu-

8 These professors should have a definite responsibility in the conduct of the college and their first and chief interest should be the training of medical tudents It is suggested that four of these professors be placed at the head of the departments of (*a*) anatomy (*b*) physiology and physiologic chemistry (*c*) pathology and bacteriology and (*d*) pharmacology and therapeutics The other four might with advantage be a signed one each to (*e*) histology and embryology under the department of anatomy and to the department of (*f*) pathology and bacteriology and (*g*) physiology and pharmacology and to the departments of (*h*) either internal medicine or surgery

dents or *less*) of not less than 200 patients who can be utilized for clinical teaching, these patients to be of such character as to permit the students to see and study the common variety of surgical and medical cases as well as a fair number in each of the so-called specialties In the use of this material *bedside and ward clinics* should be developed for sections of from five to ten students and for the seniors, a certain number of patients in medicine, surgery and the specialties should be assigned to each student under a well supervised clinical clerk system The treatment and care of these patients should be particularly observed and recorded by the student under the strict supervision of the intern or the attending staff of the hospital

(*b*) The college should also have ample hospital facilities for children's diseases, contagious diseases and nervous and mental diseases

(*c*) The college should own or control a dispensary, or outpatient department the attendance to be a daily average of 100 patients (visits) (for senior classes of 100 students *or less*), the patients to be carefully classified, good histories and records of the patients to be kept and the material to be well used The attending staff should be made up of good teachers should be well organized and be prompt and regular in attendance

(*d*) At least six maternity cases should be provided for each senior student who should have actual charge of these cases under the supervision of the attending physician Careful records of each case should be handed in by the student

(*e*) Facilities should be provided for at least thirty necropsies (for senior classes of 100 students *or less*) during each college session which are attended and participated in by senior students These as a rule, should be in the teaching hospital controlled by the medical school and performed by the professor of pathology The so-called clinical-pathologic conferences should be more widely developed in connection with the postmortems

OTHER TEACHING FACILITIES AND FINANCES

11 The college should have a working medical library, to include the more modern text and reference books with the *Index Medicus,* the Surgeon-General's Index and other serviceable indexes The library should receive regularly thirty or more leading medical periodicals, the current numbers of which should be in racks or on tables easily accessible to the students At the end of each year these periodicals should be bound and added to the files of bound periodicals The library room should be properly lighted and heated and open during all or the greater part of the day, it should be equipped with suitable card indexes as well as with tables and chairs, and have a competent librarian in charge

12 There should be a working medical museum having its various anatomic embryologic pathologic and other specimens carefully prepared labeled and indexed so that any specimen may be easily found and employed for teaching purposes It is suggested that so far as possible with each pathologic specimen coming from postmortems there also be kept the record of the postmortem the clinical history of the patient on whom the necropsy was held and microscopic slides showing the minute structures of the disease shown in the gross specimen The museum furnishes an excellent means of correlating the work of the department of pathology with that of the clinical departments

13 There should be sufficient dissecting material to enable each student individually to dissect at least the lateral half of the human cadaver to provide cross-sections and other demonstration material and to allow of a thorough course for each senior in operative surgery on the cadaver

14 For modern experimental laboratory work in physiology, pharmacology and bacteriology as well as for medical research, a supply of animals—frogs, turtles rabbits and guinea-pigs, if not also cats and dogs—is essential Proper provision, also, is necessary for the housing and care of such animals In any use made of animals every precaution should be taken to prevent needless suffering and work by students should be carefully supervised

15 Each college should have a supply of such useful auxiliary apparatus as a stereopticon, a reflectoscope carefully prepared charts embryologic or other models, manikins, dummies for use in bandaging a roentgen-ray and other apparatus now so generally used in medical teaching

16 The college should show evidences of thorough organization and of reasonably modern methods in all departments, and evidences that the equipment and facilities are *being intelligently used* in the training of medical students

17 A clear statement of the college's requirements for admission tuition time of attendance on the classes sessions, courses offered and graduation should be clearly set forth together with complete classified lists of its matriculants and latest graduating class in regular annual catalogues or announcements

18 Statistics show[9] that modern medicine cannot be acceptably taught by a medical school depending solely on the income from students' fees No medical school should expect to secure admission to or be retained in Class A therefore which does not have an annual income of at least $25 000 in addition to the amount obtained from students fees

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CLASSIFICATION OF MEDICAL COLLEGES

Revised to Aug 1 1920

CLASS A—ACCEPTABLE MEDICAL COLLEGES

ARKANSAS	
University of Arkansas Medical Department*	Little Rock
CALIFORNIA	
Leland Stanford Junior Univ School of Med	San Francisco
University of California Medical School	San Francisco
COLORADO	
University of Colorado School of Med	Boulder-Denver
CONNECTICUT	
Yale University School of Medicine	New Haven
DISTRICT OF COLUMBIA	
Georgetown University School of Medicine	Washington
George Washington University Medical School	Washington
Howard University School of Medicine[1]	Washington
GEORGIA	
Emory University School of Medicine	Atlanta
University of Georgia Medical Department[2]	Augusta
ILLINOIS	
Loyola University School of Medicine[4]	Chicago
Northwestern University Medical School	Chicago
Rush Medical College (University of Chicago)	Chicago
University of Illinois College of Medicine	Chicago
INDIANA	
Indiana Univ School of Med	Bloomington Indianapolis
IOWA	
State University of Iowa College of Medicine	Iowa City
KANSAS	
University of Kansas School of Med	Lawrence Rosedale
KENTUCKY	
University of Louisville Medical Department[5]	Louisville
LOUISIANA	
Tulane Univ of Louisiana School of Med	New Orleans
MAINE	
Bowdoin Medical School	Brunswick-Portland
MARYLAND	
Johns Hopkins University Medical Department	Baltimore
University of Maryland School of Medicine and the College of Physicians and Surgeons	Baltimore

9 See Medical College Finance J A M A April 8 1916 p 1115

* Since 1919 gives only the first two years of the medical course Raised to Class A June 9 1919

1 Rating raised to Class A June 6 1910

2 Rating raised to Class A Feb 24 1914 formerly the Atlanta Medical College

3 Class A rating restored Feb 24 1913

4 Rating raised to Class A March 1 1 9

5 Rating raised to Class A 19

MASSACHUSETTS

Boston University School of Medicine	Boston
Medical School of Harvard University	Boston
Tufts College Medical School	Boston

MICHIGAN

Detroit College of Medicine and Surgery [6]	Detroit
University of Michigan Medical School	Ann Arbor
University of Mich Homeopathic Med School	Ann Arbor

MINNESOTA

University of Minnesota Medical School	Minneapolis

MISSISSIPPI

University of Mississippi School of Medicine *	Oxford

MISSOURI

St Louis University School of Medicine	St Louis
University of Missouri School of Medicine *	Columbia
Washington University Medical School	St Louis

NEBRASKA

John A Creighton Medical College [7]	Omaha
University of Nebraska College of Medicine	Omaha

NEW HAMPSHIRE

Dartmouth Medical School *	Hanover

NEW YORK

Albany Medical College	Albany
Columbia Univ Coll of Phys and Surgs	New York City
Cornell University Medical College	New York City
Fordham University School of Medicine [8]	New York City
Long Island College Hospital [9]	Brooklyn
Syracuse University College of Medicine	Syracuse
University and Bellevue Hospital Med Coll	New York City
University of Buffalo Department of Medicine	Buffalo

NORTH CAROLINA

University of North Carolina School of Med *	Chapel Hill
Wake Forest College School of Medicine *	Wake Forest

NORTH DAKOTA

University of North Dakota School of Medicine *	University

OHIO

Ohio State University College of Medicine	Columbus
University of Cincinnati College of Medicine	Cincinnati
Western Reserve University School of Medicine	Cleveland

OKLAHOMA

Univ of Oklahoma School of Med [10]	Norman-Oklahoma City

OREGON

University of Oregon Medical School	Portland

PENNSYLVANIA

Hahnemann Medical College and Hospital	Philadelphia
Jefferson Medical College of Philadelphia	Philadelphia
University of Pennsylvania School of Med	Philadelphia
University of Pittsburgh School of Medicine [11]	Pittsburgh
Woman's Medical College of Pennsylvania	Philadelphia

SOUTH CAROLINA

Medical College of the State of South Carolina [12]	Charleston

SOUTH DAKOTA

University of South Dakota College of Medicine *	Vermilion

TENNESSEE

University of Tennessee College of Medicine [13]	Memphis
Vanderbilt University Medical Department	Nashville

TEXAS

Baylor University College of Medicine [14]	Dallas
University of Texas Department of Medicine	Galveston

UTAH

University of Utah School of Medicine *	Salt Lake City

VERMONT

University of Vermont College of Medicine	Burlington

6 Class A rating restored June 21 1914
7 Class A rating restored Feb 4 1917
8 Class A rating restored Feb 24 1914
9 Class A rating restored June 21 1914
10 Rating raised to Class A March 1 1920
11 Rating raised to Class A June 6 1910
12 Class A rating restored Feb 6 1916
13 Rating raised to Class A June 21 1914
14 Rating raised to Class A June 12 1916

VIRGINIA

Medical College of Virginia	Richmond
University of Virginia Department of Med	Charlottesville

WEST VIRGINIA

West Virginia Univ School of Medicine * [15]	Morgantown

WISCONSIN

Marquette University School of Medicine [16]	Milwaukee
University of Wisconsin Medical School *	Madison

Total 70

CLASS B—COLLEGES NEEDING GENERAL IMPROVEMENTS TO BE MADE ACCEPTABLE

ALABAMA

University of Alabama School of Medicine [17]	Mobile

CALIFORNIA

College of Medical Evangelists [18]	Loma Linda-Los Angeles
University of Southern California Medical Department (College of Physicians and Surgeons) [19]	Los Angeles

ILLINOIS

Hahnemann Medical College and Hospital [20]	Chicago

NEW YORK

New York Homeopathic Medical College and Flower Hospital [21]	New York City

OHIO

Eclectic Medical College	Cincinnati
Ohio State Univ Coll of Homeopathic Med [22]	Columbus

TENNESSEE

Meharry Medical College [23]	Nashville

Total 7

CLASS C—COLLEGES REQUIRING A COMPLETE REORGANIZATION TO MAKE THEM ACCEPTABLE

CALIFORNIA

College of Physicians and Surgeons [24]	San Francisco
Oakland College of Medicine and Surgery [25]	Oakland

ILLINOIS

Chicago Medical School [26]	Chicago

MASSACHUSETTS

College of Physicians and Surgeons [27]	Boston
Middlesex College of Medicine and Surgery [28]	Cambridge

MISSOURI

Kansas City University of Phys and Surgs [29]	Kansas City
Kansas City College of Medicine and Surgery [30]	Kansas City
St Louis College of Physicians and Surgeons [31]	St Louis

15 Class A rating restored Feb 4 1917
16 Rating raised to Class A Feb 15 1915
17 Rating dropped to Class B June 1 1920 It is being reorganized at Tuscaloosa as a two year medical school
18 Rating raised to Class B Feb 3 1918
19 Suspended in 1920
20 Rating dropped to Class B June 3 1912
21 Rating dropped to Class B Feb 15 1915
22 Rating raised to Class B Feb 4 1917
23 Rating dropped to Class B Feb 24 1914
24 Suspended medical teaching in 1918 retains a nominal existence till 1921 to grant degrees to students of three remaining classes who are completing their medical education elsewhere
25 Rated in Class B June 6 1910 rating dropped to Class C Feb 3 1918 Suspended medical teaching in 1918 retains a nominal existence till 1921 to grant degrees to students of three remaining classes who are completing their medical education elsewhere
26 Formerly the Chicago Hospital College of Medicine Last inspected April 23 1918
27 Rated in Class C since 1907 Last inspected Jan 7 1918
28 This is the medical department of the so-called University of Massachusetts When last inspected—Jan 8 1918—this school was in close association with an osteopathic college and was granting liberal advanced standing for osteopathic courses It was rated in Class C Feb 4 1918
29 Formerly the Central College of Osteopathy in 1917 under an amended charter took the name of Central College Medical Department assumed present title in 1918 Rated in Class C March 15 1918 Still teaches both osteopathy and medicine in the same building and by the same faculty
30 This institution is reported not recognized by the Missouri State Board of Health It is an off hoot of a Class C institution likewise reported not recognized by the Missouri State Board of Health No higher rating than Class C could be granted it pending an inspection which it has refused
31 Rating dropped to Class C July 1 1909 In 1915 it merged with the Medical Department of the National University of Arts and Sciences but in 1917 it was reestablished In 1918 reported not recognized by the Missouri State Board of Health

PENNSYLVANIA		
Temple University Department of Medicine[32]	Philadelphia	
TENNESSEE		
University of West Tenn Coll of Med and Surg	Memphis	
Total 10		

CLASSIFICATION OF CANADIAN MEDICAL COLLEGES

CLASS A

University of Toronto Faculty of Medicine	Toronto	Ont
McGill University Faculty of Medicine	Montreal	Que

CLASS B

Univ of Manitoba, Manitoba Med College	Winnipeg	Man
Dalhousie University Faculty of Medicine	Halifax,	N S
Queen's University Faculty of Medicine[33]	Kingston,	Ont
Western University Faculty of Medicine[34]	London,	Ont
Montreal School of Medicine and Surgery	Montreal	Que
Laval University Faculty of Medicine	Quebec,	Que

The University of Alberta at Edmonton besides the pre-medical year gives only the first two years of the medical course as measured by that of the medical schools of the United States It has not been classified

ENTRANCE REQUIREMENTS OF MEDICAL COLLEGES

Seventy-seven medical schools are now requiring, as a minimum for entrance *two years* or more of work in a college of liberal arts in addition to a four-year high-school education and voluntarily submit reports to the Council by which the enforcement of their published requirements may be verified The years when each college puts into effect respectively, the one-year and the two-year requirements, and the rating of each college, are as follows

College	One Year	Two Years	College Rating
ALABAMA			
University of Alabama School of Medicine	1914	1915	B
ARKANSAS			
University of Arkansas Medical Department	1915	1918	A
CALIFORNIA			
College of Medical Evangelists	1914	1915	B
University of Southern California Med Dept	1914	1916	B
Leland Stanford Junior University School of Med		1909	A
University of California Medical School		1905	A
COLORADO			
University of Colorado School of Medicine		1910	A
CONNECTICUT			
Yale University School of Medicine		1909	A
DISTRICT OF COLUMBIA			
Georgetown University School of Medicine		1912	A
George Washington University Medical School	1914	1918	A
Howard University School of Medicine	1910	1914	A
GEORGIA			
Emory University School of Medicine Atlanta	1914	1918	A
University of Georgia Medical Department	1914	1918	A
ILLINOIS			
Loyola University School of Medicine	1915	1918	A
Hahnemann Medical College and Hospital	1914	1916	B
Northwestern University Medical School	1908	1911	A
Rush Medical College (University of Chicago)		1904	A
University of Illinois College of Medicine	1913	1914	A
INDIANA			
Indiana University School of Medicine	1909	1910	A
IOWA			
State University of Iowa College of Medicine	1909	1910	A
KANSAS			
University of Kansas School of Medicine		1909	A
KENTUCKY			
University of Louisville Medical Department	1914	1918	A
LOUISIANA			
Tulane University of Louisiana School of Medicine	1910	1918	A
MAINE			
Bowdoin Medical School	1912	1916	A
MARYLAND			
Johns Hopkins University Medical Department		1893	A
University of Maryland School of Medicine and College of Physicians and Surgeons	1914	1918	A
MASSACHUSETTS			
Boston University School of Medicine	1914	1916	A
Medical School of Harvard University		1900	A
Tufts College Medical School	1914	1918	A
MICHIGAN			
Detroit College of Medicine and Surgery	1914	1918	A
University of Michigan Medical School		1909	A
University of Michigan Homeopathic Medical School	1912	1916	A
MINNESOTA			
University of Minnesota Medical School		1907	A
MISSISSIPPI			
University of Mississippi School of Medicine	1914	1918	A
MISSOURI			
St Louis University School of Medicine	1910	1918	A
University of Missouri School of Medicine	1906	1910	A
Washington University Medical School	1910	1912	A
NEBRASKA			
John A Creighton Medical College	1914	1918	A
University of Nebraska College of Medicine	1908	1909	A
NEW HAMPSHIRE			
Dartmouth Medical School		1910	A
NEW YORK			
Albany Medical College	1914	1918	A
Columbia University College of Phys and Surg		1910	A
Cornell University Medical College		1908	A
Long Island College Hospital	1914	1918	A
New York Homeo Med Coll and Flower Hospital	1915	1919	B
Syracuse University College of Medicine	1909	1910	A
University and Bellevue Hospital Medical College	1912	1918	A
University of Buffalo Department of Medicine	1914	1918	A
NORTH CAROLINA			
Wake Forest College School of Medicine		1908	A
University of North Carolina School of Medicine	1910	1917	A
NORTH DAKOTA			
University of North Dakota School of Medicine		1907	A
OHIO			
Eclectic Medical College	1915	1918	B
Ohio State University College of Medicine	1914	1915	A
Ohio State Univ Coll of Homeopathic Medicine	1915	1916	B
University of Cincinnati College of Medicine	1910	1915	A
Western Reserve University School of Medicine		1901	A
OKLAHOMA			
University of Oklahoma School of Medicine	1914	1917	A
OREGON			
University of Oregon Department of Medicine	1910	1915	A
PENNSYLVANIA			
Hahnemann Medical College and Hospital	1914	1917	A
Jefferson Medical College	1914	1917	A
University of Pennsylvania School of Medicine	1909	1910	A
University of Pittsburgh School of Medicine	1911	1913	A
Woman's Medical College of Pennsylvania	1914	1915	A
SOUTH CAROLINA			
Medical College of the State of South Carolina	1914	1916	A
SOUTH DAKOTA			
University of South Dakota College of Medicine	1908	1909	A
TENNESSEE			
Meharry Medical College	1914	1918	B
Vanderbilt University Medical Department	1914	1918	A
University of Tennessee College of Medicine	1914	1918	A
TEXAS			
Baylor University College of Medicine	1913	1918	A
University of Texas Department of Medicine	1910	1917	A
UTAH			
University of Utah School of Medicine	1909	1910	A
VERMONT			
University of Vermont College of Medicine	1912	1918	A
VIRGINIA			
Medical College of Virginia	1914	1915	A
University of Virginia Department of Medicine	1910	1917	A
WEST VIRGINIA			
West Virginia University School of Medicine	1911	1917	A
WISCONSIN			
Marquette University School of Medicine	1913	1915	A
University of Wisconsin Medical School		1907	A
Total 77			

The eight following medical colleges either have not announced the higher entrance requirements or such evidence as has been received does not show they have been enforced for all students enrolled

	Rating
Chicago Medical School	C
College of Physicians and Surgeons Portland	C
Middlesex College of Medicine and Surgery Cambridge Mass	C
Kansas City College of Medicine and Surgery	C

This college is an offshoot of the Kansas City Medical University has refused to have an inspection made It is reported that the Missouri State Board of Health and the Kansas Board of other States

32 Rating raised to Class B June 6 1910 dropped again to Class C June 1 1920

33 Rating dropped to Class C Feb 6 1916 restored to Class B Feb 3 1918

34 Rating raised to Class B Feb 4 1917

Kansas City University of Physicians and Surgeons	C†
St Louis College of Physicians and Surgeons	C
Temple University Department of Medicine	C
University of West Tenn Coll of Med and Surg, Memphis	C

† This college was formerly the Central College of Osteopathy in 1916 it assumed the title Central College Medical Department and took its present name in 1918 The same faculty teaches courses in both medicine and osteopathy

Scholarships in Medical Schools

As evidence that provision is being made for worthy students, regardless of their financial status, 348 scholarships are reported this year in the following thirty-eight medical schools

University of Alabama School of Medicine Mobile	67
Leland Standford Junior University Medical School*	3
University of California Medical School * San Francisco	3
University of Colorado School of Medicine,* Boulder	1
Yale University School of Medicine * New Haven Conn	2
Hahnemann Medical College and Hospital of Chicago*	6
Loyola University School of Medicine Chicago	3
Rush Medical College Chicago	7
University of Illinois College of Medicine * Chicago	7
Indiana University School of Medicine Indianapolis	12
State University of Iowa College of Medicine	1
University of Kansas School of Medicine*	17
Johns Hopkins University Medical Department Baltimore	6
University of Maryland School of Medicine * Baltimore	6
Harvard Medical School,* Boston	30
Boston University School of Medicine*	50
Detroit College of Medicine and Surgery	8
Washington University Medical School St Louis	4
Dartmouth Medical School * Hanover N H	2
University of Buffalo Department of Medicine*	1
University of Cincinnati College of Medicine*	12
Western Reserve University School of Medicine Cleveland	1
University of Oregon Department of Medicine * Portland	3
Hahnemann Medical College and Hospital of Philadelphia*	12
Jefferson Medical College of Philadelphia	2
Temple University Department of Medicine Philadelphia	3
University of Pennsylvania School of Medicine,* Philadelphia	4
Woman's Medical College of Pennsylvania * Philadelphia	24
Medical College of the State of South Carolina Charleston	8
University of Tennessee College of Medicine Memphis	14
Vanderbilt University Medical Department Nashville Tenn	4
Baylor University College of Medicine Dallas Texas	5
University of Texas Department of Medicine * Galveston	1
University of Wisconsin Medical School*	6
University of Vermont College of Medicine*	1
Medical College of Virginia Richmond	10
University of Virginia Department of Medicine * Charlottesville	2
Total in 38 medical schools	348

* Have loan funds also

Loan Funds

Besides the twenty-one colleges marked by an asterisk (*) in the above list which have loan funds for deserving but needy students, such funds are available also at the six following medical schools

College of Medical Evangelists Loma Linda Calif
Tulane University of Louisiana School of Medicine New Orleans La
University of Missouri School of Medicine Columbia Mo
University of Nebraska College of Medicine Omaha Neb
Wake Forest College School of Medicine Wake Forest N C
University of North Dakota School of Medicine University N D

DESCRIPTION OF MEDICAL COLLEGES

Below are given brief descriptions of the medical colleges in the United States and Canada that are legally chartered to teach medicine, several of which do not grant degrees The name, address, year of organization, history and date when first class graduated are given in each instance Unless otherwise stated, a class graduated each subsequent year Where official reports have been received from the college, information regarding faculty entrance requirements, length of term, fees, students (excluding specials and postgraduates), graduates, name of dean and next session is given without discrimination, regardless as to whether the college is sectarian or not In a few instances in which such reports were not received, the information published is from other reliable sources Figures for graduates include all who graduated since July 1, 1919 Extract of rules and the membership of the Association of American Medical Colleges are shown following the list of colleges Figures showing population of cities and states are taken from the United States Census Bureau's estimate for 1918 except that in cities marked with an asterisk (*) the census returns for 1920 have been given Statements have been added showing the preliminary requirements held by state licensing boards where those requirements include one or two years of collegiate work Ten states Alaska (Ter), Illinois, Iowa, Michigan New Jersey, North Dakota Pennsylvania, Rhode Island, Texas and Washington, require also a year's hospital internship as an essential qualification for a license

Figures from 1920 Census returns

ALABAMA

Alabama, population 2,395,270, has one medical college, the School of Medicine of the University of Alabama, located in Tuscaloosa, a city with a population of 11,996*

In order to secure licenses to practice medicine in Alabama, students matriculating in the session of 1915-16 and thereafter must have completed two years of work in an approved college of liberal arts, including courses in physics, chemistry, biology and a modern language, prior to entering on the study of medicine This applies to all graduates of 1919 and thereafter

Tuscaloosa

UNIVERSITY OF ALABAMA SCHOOL OF MEDICINE, University Campus Tuscaloosa—Organized in 1859 at Mobile as the Medical College of Alabama Classes graduated in 1861 and subsequent years excepting 1862 to 1868 inclusive Reorganized in 1897 as the medical department of the University of Alabama Present title assumed in 1907, when all property was transferred to the University of Alabama In 1920 clinical teaching was suspended and the medical school was removed to the university campus at Tuscaloosa During the next year only the work of the freshman year will be given In 1921 1922 and thereafter the first two years of the medical course will be given Total registration for 1919 1920 was 51 graduates 10 The fifty fifth session begins Sept 6 1920 and ends May 25 1921

ARKANSAS

Arkansas population 1,792 965 has one medical college, the Medical Department of the University of Arkansas, located in Little Rock, a city of 64 997* Hereafter it offers only the courses of the first two years of the medical course.

To secure licenses to practice medicine in Arkansas, students matriculating in the session of 1918-19 and thereafter must have completed two years of collegiate work including college courses in physics, chemistry, biology and a modern language before beginning the study of medicine This applies to all graduates of 1922 and thereafter

Little Rock

UNIVERSITY OF ARKANSAS MEDICAL DEPARTMENT Markham and Center Streets—Organized in 1879 as the Medical Department of Arkansas Industrial University It assumed the present title in 1899 In 1911 the College of Physicians and Surgeons united with it and the new school was made an integral part of the University of Arkansas The first class was graduated in 1880 Clinical teaching suspended in 1919 The faculty consists of 8 professors and 8 lecturers and assistants, total 16 Entrance requirements are two years of collegiate work beyond a four year high school course The course of study covers two years of thirty two weeks each The fees are $60 each year The Dean is Dr Morgan Smith Total registration 1919 1920 was 31 graduates 6 The forty second session begins Sept 20, 1920, and ends June 8, 1921

CALIFORNIA

California population 3,119 412, has three medical colleges Two are located in San Francisco, a city of 508,410* inhabitants They are Leland Stanford Junior University School of Medicine and the College of Medicine of the University of California The College of Medical Evangelists is located at Loma Linda and Los Angeles, the latter city having a population of 575 480*

To secure licenses to practice medicine in California under the 'physician's and surgeon's" certificate, students matriculating in medical colleges in and after the session of 1915 16 prior to such matriculation, must have completed at least one year of recognized collegiate work including college courses in physics, chemistry, biology and a modern language. This applies to all graduates of 1919 and thereafter

Berkeley-San Francisco

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL University Campus Berkeley Second and Parnassus Avenues San Francisco—Organized

in 1863 as the Toland Medical College The first class graduated in 1864 In 1872 it became the Medical Department of the University of California In 1909 the College of Medicine of the University of Southern California at Los Angeles by legislative enactment became a clinical department This Los Angeles portion was changed to a graduate school in 1914 In 1915 the Hahnemann Medical College of the Pacific was merged and elective chairs in homeopathic materia medica and therapeutics were provided Two years (in and after August 1922 three years) of collegiate work are required for admission The work of the first year and a half is given at Berkeley and the work of the last two and a half years at San Francisco The faculty is composed of 47 professors and 152 associates and assistants a total of 199 The course covers five years of nine months each the fifth year to consist of an internship or of special work in a department of the medical school Fees for the four years respectively are $200 $155 $160 and $150 The Acting Dean is Dr Wallace I Terry San Francisco Total registration for 1919 1920 was 214 graduates 21 The forty eighth session begins Aug 16 1920 and ends May 11 1921

Loma Linda-Los Angeles

COLLEGE OF MEDICAL EVANGELISTS —Organized in 1909 The faculty numbers 109 The first class graduated in 1914 The laboratory departments are at Loma Linda the clinical departments at Los Angeles The course extends over four years of nine months each Two years of college work are required for admission The total fees for the four years respectively are $221 $216 $201 and $211 The Dean is Dr P T Magan The total registration for 1919 1920 was 101 graduates 14 The twelfth session begins Sept 5 1920 and ends May 26 1921

San Francisco-Palo Alto

LELAND STANFORD JUNIOR UNIVERSITY SCHOOL OF MEDICINE University Campus Palo Alto and Sacramento and Webster Streets San Francisco —Organized in 1908 when by an agreement the interests of Cooper Medical College were taken over The first class was graduated in 1913 The faculty consists of 56 professors and 56 lecturers assistants etc a total of 112 Three years of collegiate work are required for admission The school has the quarter system and the completion of any three quarters constitutes a college year The course covers five years of nine months each including a year of practical or intern work The total fees for each of the first four years is $186 The Dean is Dr W Ophuls San Francisco The total registration for 1919 1920 was 137, graduates 20 The eleventh session begins Oct 1, 1920 and ends June 17 1921

COLORADO

Colorado, with a population of 1,014,581, has one medical college, the University of Colorado School of Medicine The first two years of the course are given at Boulder, the seat of the university, while the last two, or clinical years, are given in Denver, which has a population of 256,369 *

The Colorado State Board of Medical Examiners will register without further examination graduates of medical colleges in good standing who present licenses issued after examination by any other licensing board The law permits any one, graduate or nongraduate to try the board's written examination No graduate of 1914 or thereafter is eligible to obtain a license in Colorado, or indorsement of his credentials, unless he graduated from a medical college which, at the time he matriculated, required at least two years' study, without conditions, in an accredited college of liberal arts, and this work must have included courses in physics, chemistry, biology and one modern language

Boulder-Denver

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE.—Organized in 1883 Classes were graduated in 1885 and in all subsequent years except 1898 and 1899 Denver and Gross College of Medicine was merged Jan 1 1911 The faculty embraces 12 professors 20 associate and assistant professors and 29 lecturers instructors and assistants a total of 61 The work embraces a graded course of four years of nine months each The entrance requirements are two years of college work counting toward a degree in arts in an accredited college or university The fees for residents of Colorado for each of the four years are respectively $106 $106 $98 and $103 and $30 more each year for non residents The Dean is Dr Charles N Meader The total registration for 1919 1920 was 71 graduates 17 The thirty ninth session begins Sept 27 1920 and ends June 13 1921

CONNECTICUT

Connecticut, with a population of 1 286 268 has one medical college, Yale University, School of Medicine located in New Haven, population 162 390 *

Candidates for license to practice medicine in Connecticut who graduate in 1914 or thereafter are not eligible unless prior to entering on the study of medicine they had completed, in addition to an accredited four-year high school education, at least nine months of collegiate work including college courses in physics chemistry and general biology

New Haven

YALE UNIVERSITY SCHOOL OF MEDICINE 150 York Street and Congress Avenue and Cedar Street —Chartered in 1810 as the Medical Institution of Yale College Organized in 1812 instruction began in 1813 first class graduated in 1814 A new charter in 1879 changed the name to the Medical Department of Yale College In 1884 the Connecticut Medical Society surrendered such authority as had been granted by the first charter In 1887 Yale College became Yale University The faculty consists of 24 professors and 71 lecturers and assistants a total of 95 The requirements for admission are two years of collegiate work plus evidence of satisfactory completion of courses in general physics general inorganic chemistry general biology organic chemistry and physical chemistry or laboratory physics all reasonably equivalent to the courses in these subjects in Yale University The student also must have a reading knowledge of German The course covers four years of nine months each The fees for the four years respectively are approximately $205 $200 $200 and $210 The Dean is Dr Milton C Winternitz The total registration for 1919 1920 was 88 graduate 19 The one hundred and eighth session begins Sept 30 1920 and ends June 22 1921

DISTRICT OF COLUMBIA

The District of Columbia population 437 571 * has three medical colleges George Washington University Medical School Georgetown University School of Medicine and Howard University, School of Medicine

Washington

GEORGE WASHINGTON UNIVERSITY MEDICAL SCHOOL 1335 H Street N W —Organized in 1825 as the Medical Department of Columbian College Also authorized to use the name National Medical College Classes were graduated in 1826 and in all subsequent years except 1834 to 1838 and 1861 to 1863 inclusive The original title was changed to Medical Department of Columbian University in 1873 In 1903 it absorbed the National University Medical Department In 1904 by an act of Congress the title of George Washington University was granted to the institution The faculty is composed of 48 professors and 47 instructors demonstrators and assistants a total of 95 Two years of collegiate work are required for admission The course covers four years of thirty two weeks each The total fees are $200 each year The Dean is Dr William C Borden The total registration for 1919 1920 was 114 graduates 21 The ninety ninth session begins Sept 29 1920 and ends June 8 1921

GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE 920 H Street N W —Organized in 1851 The first class graduated in 1852 The faculty contains 21 professors 69 instructors and assistants total 90 Two years of collegiate work are required for entrance The course of study covers four terms of eight and one half months each The fees for each of the four sessions respectively are $205 $200 $200 and $210 The Dean is Dr George M Kober The registration for 1919 1920 was 120 graduates 19 The eventieth session begins Sept 24, 1920 and ends June 11 1921

HOWARD UNIVERSITY SCHOOL OF MEDICINE Fifth and W Streets N W —Chartered in 1867 Organized in 1869 The first class graduated in 1871 Colored students compose a majority of those in attendance The faculty comprises 15 professors and 24 lecturers and assistants 39 in all The admission requirement are two years of collegiate work including physics chemistry botany and zoology English and two years of French or German The course covers four years of thirty two weeks each The fees of each of the four sessions respectively are $165 $155 $155 and $162 The Dean is Dr Edward A Balloch Registration for 1919 1920 was 113 graduate 27 The fifty third session begins Oct 1 1920 and ends June 10 1921

GEORGIA

Georgia population 2 935 617 has two medical colleges University of Georgia Medical Department, located in Augusta population 52 548 * and the Emory University School of Medicine in Atlanta a city of 200 616 *

In order to secure a license to practice medicine in Georgia students matriculating in the session of 1918 19 and thereafter must have completed two years of work in an approved college of liberal arts and sciences including courses in physics chemistry and biology prior to entering on the study of medicine. This applies to all graduates of 1922 and thereafter

Atlanta

EMORY UNIVERSITY SCHOOL OF MEDICINE 9 N Butler [illegible] Organized in 1854 Classes graduated 1857 [illegible] Reorganized in 1880 Classes graduated [illegible] year except 1879 In 1898 it merged [illegible] (organized in 1878) taking the [illegible] and Surgeon In 1913 it merged [illegible] (organized in 1905) assuming the [illegible] Became the Medical Department [illegible] present title in 1915 Two years [illegible] entrance The faculty numbers [illegible] of thirty two weeks each [illegible] tively are $162 $160 $16[illegible] The D[illegible]

Total registration for 1919 1920 was 174 graduates 28 The next session begins Sept 21 1920 and ends June 6, 1921

Augusta

UNIVERSITY OF GEORGIA MEDICAL DEPARTMENT University Place—Organized in 1828 as the Medical Academy of Georgia the name being changed to the Medical College of Georgia in 1829 Since 1873 it has been known as the Medical Department of the University of Georgia Entire property transferred to the university in 1911 Classes were graduated in 1833 and in all subsequent years except 1862 and 1863 The faculty includes 16 professors and 30 assistants 46 in all Two years of collegiate work are required for entrance The course is four years of thirty four weeks each Fees are $5 for matriculation and $60 each year for residents of Georgia and $150 each year for non residents The Dean is Dr W H Doughty Jr The total registration for 1919 1920 was 64 graduates 15 The eighty ninth session begins Sept 15, 1920 and ends May 30 1921

ILLINOIS

Illinois, population 6 317,734, has six medical colleges, two of which give instruction at night, all located in Chicago a city of 2,701 212* inhabitants, and are as follows Rush Medical College, Northwestern University Medical School, University of Illinois College of Medicine Loyola University School of Medicine, Hahnemann Medical College and Hospital and the Chicago Medical School

To be eligible for license to practice medicine in Illinois, students matriculating in the sessions of 1915 16 and of 1918-19, in addition to an accredited four-year high school education must have completed, respectively one year and two years of collegiate work including courses in physics chemistry biology and a modern language, to be taken either in a preliminary year given by a recognized medical college or in an approved college of liberal arts Graduates of 1923 and thereafter must have completed also a year s internship in a hospital

Chicago

RUSH MEDICAL COLLEGE—Founded in 1837 organized in 1843 was the medical department of Lake Forest University from 1887 until 1898 when it became affiliated with the University of Chicago The first class graduated in 1844 The faculty is composed of 118 professors 186 associates, instructor etc a total of 304 The requirements for admission are two years of college work including courses in college chemistry physics and biology and a reading knowledge of German or French Classes are limited to 100 students in each of the freshman and sophomore classes and to 120 students in each of the clinical years No application for admission is accepted after September 1 The school operates under the quarter system in which the year is divided into four quarters of twelve weeks each the completion of the work of three of these quarters gives credit for a college year The course covers four years of eight and a half months each and a fifth year consisting of a hospital internship or of a fellowship in one of the departments All freshman and sophomore studies are given at the University of Chicago The clinical years are given in the building at the corner of Wood and Harrison streets The tuition fees for each of the four years respectively are $225 $225 $235 and $235 A matriculation fee of $5 is paid but once and there are incidentals amounting to from $5 to $7 annually The Deans are Dr Frank Billings and Dr John M Dodson Total registration for 1919 1920 was 672 graduates 115 One hundred and twenty six other students completed the work of the fourth year and will receive their degrees when a hospital internship has been completed The seventy seventh session begins Oct 1 1920 and ends June 15 1921

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL 2421 South Dearborn Street—Organized in 1859 as the Medical Department of Lind University First class graduated in 1860 In 1864 it became independent as the Chicago Medical College It united with Northwestern University in 1869 but retained the name of Chicago Medical College until 1891 when the present name was taken Became an integral part of Northwestern University in 1905 The faculty comprises 60 professors and 112 lecturers and assistants a total of 172 The requirements for admission are such as will admit to the College of Liberal Arts of Northwestern University plus two years of college work including courses in physics chemistry biology and a modern language The course covers four years of eight months each The fees for the four years respectively are $210 $205 $196 and $190 The Dean is Dr Arthur I Kendall The total registration for 1919 1920 was 408 graduates, 73 The sixty first session begins Oct 5 1920 and ends June 11 1921

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE 508 S Honore Street—Organized in 1882 as the College of Physicians and Surgeons The first class graduated in 1883 It became the Medical Department of the University of Illinois by affiliation in 1897 and an integral part in 1910 The relationship with the university was canceled in June 1912 but restored in March 1913 when the present title was assumed Two years of collegiate work are required for admission The curriculum covers four years of nine months each and a year s internship in an approved hospital The faculty is composed of 50 professors 99 assistants and instructors a total of 154 The total fees for the four years respectively are $165 $160 $150 and $170 The Dean is Dr Albert C Eycleshymer The total registration for 1919 1920 was 270 graduates, 50 The thirty ninth session begins Sept 28 1920 and ends June 10 1921

* Figure from 1920 census returns

LOYOLA UNIVERSITY SCHOOL OF MEDICINE 706 S Lincoln St Chicago—Organized in 1868 as the Bennett College of Eclectic Medicine and Surgery Eclecticism dropped and title of Bennett Medical College assumed in 1909 First class graduated in 1870 and a class graduated each subsequent year Absorbed the Illinois Medical College in 1910 and the Reliance Medical College in 1911 In 1910 it became by affiliation the School of Medicine of Loyola University the university assumed full control in 1915 Took over by purchase the Chicago College of Medicine and Surgery in 1917 Two years of college work are required for admission The faculty is composed of 53 professors 62 assistants and instructors a total of 115 The total fees for the four years are respectively $165 $165 $165 and $180 The Dean is Dr Louis D Moorhead The total enrolment for 1919 1920 was 204 graduates 23 The next session begins Oct 1 1920 and ends June 15 1921

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF CHICAGO 2811 Cottage Grove Avenue—Organized in 1859 The first class was graduated in 1861 Absorbed the Chicago Homeopathic Medical College in 1904 The faculty includes 65 professors and 27 lecturers assistants etc a total of 92 Two years of collegiate work are required for admission The course extends over four years of eight months each The tuition fees for the four years respectively are $176 $161 50 $176 50 and $191 50 The Dean is Dr Joseph P Cobb The total registration for 1919 1920 was 48 graduates 10 The sixty first session begins Sept 28 1920 and ends June 15 1921

CHICAGO MEDICAL SCHOOL an afternoon and night school located at 3832 Rhodes Avenue—Organized in 1911 as the Chicago Hospital College of Medicine chartered in 1912 In December 1917 the classes of the Jenner Medical College were transferred to it Total registration for 1919 1920 was 88 graduates about 15 *Official reports indicate that the diplomas from this college are not recognized by the licensing boards of thirty nine states*

INDIANA

Indiana population 2 854 167, has one medical college, the Indiana University School of Medicine, located at Indianapolis a city of 314 194* people except that the work of the first year is offered also at Bloomington the seat of the University

Candidates for license to practice medicine in Indiana who matriculated between Jan 11 1910, and Jan 1 1911, must have completed one year of collegiate work in addition to an accredited four-year high school course, prior to beginning the study of medicine Those matriculating subsequent to Jan 1 1911 must have completed two years of work in a recognized college of liberal arts

Bloomington and Indianapolis

INDIANA UNIVERSITY SCHOOL OF MEDICINE—Organized in 1903 but did not give all of the work of the first two years of the medical course until 1905 In 1907 by union with the State College of Physicians and Surgeons the complete course in medicine was offered In 1908 the Indiana Medical College which was formed in 1905 by the merger of the Medical College of Indiana (organized in 1878) the Central College of Physicians and Surgeons (organized in 1879) and the Fort Wayne College of Medicine (organized in 1879) merged into it The first class was graduated in 1908 The faculty consists of 64 professors and 87 lecturers associates and assistants a total of 151 Two years of collegiate work are required for admission The work of the first year is emphasized only at Bloomington The work of the other three years is all at Indianapolis The fees for the four years respectively are $125 $125 $150 and $150 Matriculation fee $5 microscope fee $5 to $7 50 per semester A fifth optional intern year leading to the M D cum laude has been added The Assistant Dean at Bloomington is Dr B D Myers the Dean is Dr Charles P Emerson Indianapolis The total registration for 1919 1920 was 234 graduates 48 The next session begins Sept 14 1920, and ends June 8 1921

IOWA

Iowa, population 2 224 771 has one medical college, the College of Medicine of the State University of Iowa, located in Iowa City, population 11 267*

Candidates for license to practice medicine in Iowa who graduated subsequent to Jan 1, 1915 must have completed two years of work in an approved college of liberal arts prior to beginning the study of medicine, this preliminary college work to have included courses in physics, chemistry, biology and a foreign language.

Iowa City

STATE UNIVERSITY OF IOWA COLLEGE OF MEDICINE University Campus—Organized in 1869 First session began in 1870 First class graduated in 1871 Absorbed Drake University College of Medicine in 1913 The faculty is made up of 32 professors 24 lecturers, demonstrators and assistants a total of 56 Two years of collegiate work including courses in physics chemistry biology and French or German are required for admission The course of study covers four years of thirty six weeks each The tuition fee for residents of Iowa is $85 per year and for nonresidents $100 plus a matriculation fee of $10 and a graduation fee of $10 The Dean is Dr Lee Wallace Dean Iowa City Total registration for 1919 1920 was 230 graduates 53 The fifty first session begins Sept 23 1920 and ends June 14 1921

KANSAS

Kansas, population 1 874 195, has one medical college The School of Medicine of the University of Kansas gives its first two years in Lawrence, population 12,456* and the last two years in Rosedale, a suburb of Kansas City, which has a population of 397,284

Candidates for license to practice medicine in Kansas who matriculated in the session of 1910-11 and thereafter must have completed at least one year of collegiate work including college courses in physics, chemistry and biology in addition to an accredited four-year high school course This applies to graduates of 1914 and thereafter

Lawrence and Rosedale

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE—Organized in 1880 It offered only the first two years of the medical course until in 1905 when it merged with the Kansas City (Mo) Medical College founded in 1869 the College of Physicians and Surgeons founded in 1894 and the Medico Chirurgical College founded in 1897 First class graduated in 1906 The clinical courses are given at Rosedale Absorbed Kansas Medical College in 1913 The faculty including lecturers and clinical assistants numbers 73 The requirements for admission are two years of collegiate work The course covers four years of nine months each The total fees for each of the four years are respectively $111 $111 $103 and $103 for residents of the state For nonresidents the fees of the first two years are $121 each year The Dean is Dr S J Crumbine Associate Dean Dr M D Sudler The total registration for 1919 1920 was 133 graduates 23 The forty first session begins Sept 13 1920 and ends June 8 1921

KENTUCKY

Kentucky, population 2 408 547, has one medical college, the University of Louisville Medical Department, situated in Louisville, a city of 234,891* inhabitants

To be eligible for license to practice medicine in Kentucky, all students matriculating in and after the session of 1914-15 and 1918-19, in addition to an accredited four-year high school course, must have completed respectively, one year and two years of college work, including college courses in physics chemistry, biology and a modern language prior to beginning the study of medicine

Louisville

UNIVERSITY OF LOUISVILLE MEDICAL DEPARTMENT First and Chestnut Streets—Organized in 1837 as the Louisville Medical Institute The first class graduated in 1838 and a class graduated in each subsequent year except in 1863 In 1846 the present name was assumed In 1907 it absorbed the Kentucky University Medical Department In 1908 it absorbed the Louisville Medical College the Hospital College of Medicine and the Kentucky School of Medicine Two years of collegiate work are required for admission It has a faculty of 29 professors and 90 lecturers and assistants a total of 119 The course covers four years of thirty two weeks each The fees for each of the four years are $200 The Dean is Dr Henry Enos Tuley The total registration for 1919 1920 was 136 graduates 29 The next session begins Sept 21 1920 and ends June 2 1921

LOUISIANA

Louisiana, having a population of 1,884,778, contains one medical college the School of Medicine of the Tulane University of Louisiana situated in New Orleans, a city of 387,408*

Candidates for license to practice medicine in Louisiana who graduate in 1919 and 1922 must present evidence that they have successfully completed, at an approved college or university, respectively, one year and two years of college work including biology, physics, chemistry and a modern language, before entering on the study of medicine These requirements apply to all students who matriculated, respectively, in 1915 and 1918

New Orleans

TULANE UNIVERSITY OF LOUISIANA SCHOOL OF MEDICINE University Campus and 1551 Canal Street—Organized in 1834 as the Medical College of Louisiana Classes were graduated in 1835 and in all subsequent years except 1863 65 inclusive It was transferred to the Medical Department of the University of Louisiana in 1847 and became the Medical Department of the Tulane University of Louisiana in 1884 Present name in 1913 when it became the School of Medicine of the College of Medicine of the Tulane University of Louisiana The faculty has 33 professors and 98 assistant professors, instructors demonstrators etc a total of 131 The course covers four years of thirty two weeks each Two years of collegiate work are required for admission Total fees for each of the four years respectively are $220 $225 $215 and $245 The Dean is Dr Isadore Dyer The total registration for 1919 1920 was 325 graduates 81 The eighty sixth session begins Sept 27 1920 and ends June 8 1921

MAINE

Maine population 782 191 has one medical college the Bowdoin Medical School located in Brunswick and Portland the latter having a population of 69,196*

To secure a license to practice in Maine students matriculating in and after the session of 1915-16 must have completed one year of work in an approved college of arts and sciences before entering on the study of medicine This applies to graduates of 1919 and thereafter

Brunswick-Portland

BOWDOIN MEDICAL SCHOOL The Medical Department of Bowdoin College The first two years are given at Bowdoin College Brunswick the last two at Portland building located on Chadwick Street—Organized in 1820 as the Medical School of Maine The first class graduated in 1821 Present title assumed in 1915 The faculty numbers 58 Two years of collegiate work including courses in physics chemistry and biology are required for admission The course covers four years of eight months each The total fees are $150 each year The Dean is Dr Addison S Thayer 10 Deering Street Portland The total number of students in 1919 1920 was 43 graduates 10 The one hundredth session begins Oct 7 1920 and ends June 20 1921

MARYLAND

Maryland with a population of 1,384 539 contains two medical colleges located in Baltimore a city with 733 826* inhabitants They are as follows Johns Hopkins University Medical Department and the University of Maryland School of Medicine and College of Physicians and Surgeons, the last two having been merged

To be eligible to practice medicine in Maryland, all students matriculating in the session of 1914 15 and 1918-19 in addition to a four-year high school education must have completed respectively one year and two years of college work including courses in physics chemistry biology and French or German prior to beginning the study of medicine

Baltimore

JOHNS HOPKINS UNIVERSITY MEDICAL DEPARTMENT Washington and Monument Streets—Organized in 1893 The first class graduated in 1897 The faculty consists of 52 professors and 133 clinical professors etc a total of 185 The requirements for admission demand that the applicant either has (*a*) completed the chemical biologic course which leads to the A B degree in the university or (*b*) graduated at an approved college or scientific school and has a knowledge of French and German physics chemistry and biology such as may be obtained from a years course The course extends over four years of eight and one half months each The total fees are $267 each year The Dean is Dr I Whitridge Williams Total registration for 1919 1920 was 390 graduates 93 The twenty eighth session begins Sept 28 1920 and ends June 21 1921

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND THE COLLEGE OF PHYSICIANS AND SURGEONS Lombard and Green Streets—Organized in 1807 as the College of Medicine of Maryland The first class graduated in 1810 In 1812 it became the University of Maryland School of Medicine Baltimore Medical College was merged into it in 1913 In 1915 the College of Physicians and Surgeons was merged and the present name assumed The combined faculty numbers 164 Two years of collegiate work are required for admission The course covers four years of eight months each The total fees are $215 each year The Dean is Dr J M H Rowland Total registration for 1919 1920 was 244 graduates 59 The fourteenth session begins Oct 1 1920 and ends June 1 1921

MASSACHUSETTS

Massachusetts population 3 832 790 has five medical colleges Medical School of Harvard University Boston University School of Medicine Tufts College Medical School College of Physicians and Surgeons and the Middlesex College of Medicine and Surgery They are all situated in Boston a city of 747 923* except the last named which is in Cambridge a city of 109 456*

Boston

MEDICAL SCHOOL OF HARVARD UNIVERSITY 240 Longwood Avenue—Organized in 1782 The first class graduated in 1788 It has a faculty of 68 professors and 154 instructors and assistants a total of 22 Candidates for admission must present a college degree or two years of work leading to such a degree with standing in the upper third of the class The college work must include a year of physics biology general chemistry a half year of organic chemistry and a reading knowledge of French or German The total fees for each of the four years are $210 $225 $225 and $225 The Dean is Dr David L Edsall The total registration for 1919 1920 was 413 graduates 96 The one hundred and thirty ninth session began Sept 27 1920 and ends June 23 1921

BOSTON UNIVERSITY SCHOOL OF MEDICINE 80 East Concord Street Organized in 1873 In 1874 the New England

founded in 1848 was merged into it The first class graduated in 1874 Became nonsectarian in 1918 Two years of collegiate work are required for admission The faculty includes 23 professors 55 associates etc making a total of 78 The course covers four years of eight months each Total fees for each of the four years are $175 $162 $160 and $190 The Dean is Dr John P Sutherland Total registration for 1919 1920 was 88 graduates 13 The forty eighth session begins Oct 7 1920 and ends June 15 1921

TUFTS COLLEGE MEDICAL SCHOOL 416 Huntington Avenue—Organized in 1893 as the Medical Department of Tufts College The first class graduated in 1894 It has a faculty of 45 professors and 72 assistants lecturers etc a total of 117 Two years of collegiate work is required for admission The course covers four years of eight months each The total fees for each of the four years are $211 $196 $186 and $191 The Dean is Dr Charles F Painter Total registration for 1919 1920 was 338 graduates 83 The twenty fifth session begins Sept 16 1920 and ends June 15 1921

COLLEGE OF PHYSICIANS AND SURGEONS 517 Shawmut Avenue—Organized in 1880 The first class graduated in 1892 Total attendance of medical students during 1919 1920 was about 32 There were 9 graduates *This college has been reported not recognized by the Massachusetts Medical Society and by the licensing boards of forty states*

Cambridge

MIDDLESEX COLLEGE OF MEDICINE AND SURGERY Cambridge—Organized in 1914 under the charter of the Worcester Medical College which became extinct in 1859 A class was graduated in 1915 and each subsequent year Was closely related in its interests with an osteopathic college and granted a liberal advanced standing for work done in that and other osteopathic colleges During 1919 1920 it had a total enrolment of 189 graduates 14 *This college has been reported as not recognized by the licensing boards of thirty nine states*

MICHIGAN

Michigan, population 3,133 678, has three medical colleges Two of these the University of Michigan Department of Medicine and Surgery and the Homeopathic Medical College of the University of Michigan, are located at Ann Arbor a city of 19 516 * people The Detroit College of Medicine and Surgery is located at Detroit a city of 993,739 * inhabitants To be eligible for license to practice medicine in Michigan all students matriculating in and after the sessions of 1914-15 and 1918-19, in addition to an accredited four-year high school education must have completed, respectively, one year and two years of work in an approved college of liberal arts, including college courses in physics chemistry, biology and French or German, prior to beginning the study of medicine

Ann Arbor

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL—Organized in 1850 as the University of Michigan Department of Medicine and Surgery The first class graduated in 1851 Present title assumed in 1915 It has a faculty composed of 18 professors and 69 associates instructors etc a total of 87 The entrance requirements are two years of college work including courses in chemistry physics and biology with laboratory work and a reading knowledge of one modern language The curriculum embraces four years of nine months each The total fees for Michigan students are $140 each year and $165 for nonresidents The Dean is Dr Victor C Vaughan The total registration for 1919 1920 was 389 graduates 75 The seventy first session begins Oct 5 1920 and ends June 30 1921

UNIVERSITY OF MICHIGAN HOMEOPATHIC MEDICAL SCHOOL—Organized in 1875 The first class graduated in 1877 The work of the first two years is taken under the same teachers and in the same classes with the Medical School of the University of Michigan and the fees charged are the same The faculty for the last two years composes 6 professors and 11 associates instructors etc The entrance requirements are two years of collegiate work The Dean is Dr W B Hinsdale The total registration for 1919 1920 was 42 graduates 7 The next session begins Oct 5 1920 and ends June 30 1921

Detroit

DETROIT COLLEGE OF MEDICINE AND SURGERY 250 St Antoine Street—Organized as the Detroit College of Medicine in 1885 by consolidation of Detroit Medical College organized in 1868 and the Michigan College of Medicine organized in 1880 Reorganized with present title in 1913 The first class graduated in 1886 In 1918 it became a municipal institution under the control of the Detroit Board of Education Entrance requirements are two years of collegiate work The faculty embraces 54 professors 175 lecturers etc a total of 209 The course covers five years of eight months each (including the hospital intern year) The total fees each year are $150—if residents of Detroit the fees are $25 The Dean is Dr W H MacCraken The total registration for 1919 1920 was 140 graduates 41 The thirty sixth session begins Sept 27 1920 and ends June 18 1921

MINNESOTA

Minnesota population 2,345,287, contains one medical school, the University of Minnesota Medical School situated in Minneapolis a city of 380 582 * inhabitants

Candidates for license to practice medicine in Minnesota who graduated subsequent to June 1, 1912, in addition to an accredited four-year high school education, must have completed two years of work the equivalent of that done in the liberal arts department of the University of Minnesota, including courses in physics, chemistry and biology, prior to beginning the study of medicine

Minneapolis

UNIVERSITY OF MINNESOTA MEDICAL SCHOOL—Organized in 1883 as the University of Minnesota College of Medicine and Surgery reorganized in 1888 by absorption of St Paul Medical College and Minnesota Hospital College The first class graduated in 1889 In 1908 the Minneapolis College of Physicians and Surgeons organized in 1883 was merged In 1909 the Homeopathic College of Medicine and Surgery was merged Present title in 1913 The faculty includes 87 professors and 53 instructors and assistants a total of 140 The curriculum covers four years of nine months each and a year's internship in an approved hospital The school is operated on the four quarter plan The entrance requirements are two years of University work which must include six semester credits of rhetoric eight semester credits of physics twelve credits of general chemistry, qualitative analysis and organic chemistry eight credits of zoology and a reading knowledge of French or German Students are required to secure a degree of B S or A B before the M D is granted Total fees are $186 for residents and $216 for nonresidents each year of three quarters The Dean is Dr E P Lyon The total registration for 1919 1920 was 368 graduates 60 The Thirty second session begins Sept 29 1920 and ends June 14 1921 The summer quarter begins June 21

MISSISSIPPI

Mississippi, population 2 001 466, has one medical college, the Department of Medicine of the University of Mississippi, which is located at Oxford, a city of 1,948 * inhabitants Candidates for license to practice medicine in Mississippi who matriculate in the sessions of 1915-16 and of 1919-20 and thereafter in addition to a standard four-year high school education, must have completed, respectively, one year and two years of work in an approved college or university, including courses in physics, chemistry, biology and a modern language, before entering on the study of medicine.

Oxford

UNIVERSITY OF MISSISSIPPI SCHOOL OF MEDICINE—Organized in 1903 Gives only the first two years of the medical course In 1908 a clinical department was established at Vicksburg but was discontinued in 1910 after graduating one class The session extends over eight and a half months Entrance requirements are two years of collegiate work The total fees each year are $133 The faculty numbers 16 The Dean is Dr W S Leathers The total registration for 1919 1920 was 51 The eighteenth session begins Sept 15 1920 and ends May 31 1921

MISSOURI

Missouri population 3,448 498, has six medical colleges St Louis, population 772 897,* contains three of these, viz, the School of Medicine of St Louis University, Washington University Medical School, and the St Louis College of Physicians and Surgeons Kansas City with a population of 297,847, has two colleges, the Kansas City College of Medicine and Surgery and the Kansas City University of Physicians and Surgeons The School of Medicine of the University of Missouri is at Columbia, a town of 10 681 * people

Columbia

UNIVERSITY OF MISSOURI SCHOOL OF MEDICINE—Organized at St Louis in 1845 was discontinued in 1855 but was reorganized at Columbia in 1872 Teaching of the clinical years was suspended in 1909 The faculty includes 9 professors and 18 assistant professors lecturers etc a total of 27 The course covers two years of thirty two weeks each The entrance requirements are two years of college work including French or German 8 hours general zoology 8 hours physics 8 hours inorganic chemistry 8 hours organic chemistry 5 hours and general bacteriology 3 hours Total fees are $80 for the first and $56 for the second year Nonresidents of the state pay $10 per term extra The Dean is Dr Guy L Noyes Total registration for 1919 1920 was 69 The next session begins Aug 30 1920 and ends April 27 1921

Kansas City

KANSAS CITY COLLEGE OF MEDICINE AND SURGERY Twenty Third and Holmes Streets—Organized in 1915 as an offshoot of the Eclectic Medical University a Class C medical school now extinct It claims to be an eclectic college but is reported not recognized as such by the National Eclectic Medical Association 41 Total registration for 1919 1920 was about 128 graduates 41 Since this school is an offshoot of a Class C medical college and is *reported not recognized by the Missouri State Board of Health and by the licensing boards of thirty six other states* no higher rating can be granted to it pending an inspection which it has refused

* Figures from 1920 Census returns

KANSAS CITY UNIVERSITY OF PHYSICIANS AND SURGEONS 729 Troost Street—Originally chartered in 1903 as the Central College of Osteopathy chartered amended in 1917 by which it obtained the right to grant degrees in medicine and the name was changed to the Central College Medical Department Present title in 1918 Very liberal advanced standing allowed for work done in osteopathic colleges and it still has osteopathic classes There were 72 medical students enrolled in 1919 1920 of whom 39 graduated Rated in Class C by the Council on Medical Education *Reported not recognized by the licensing boards of Missouri and of forty one other states*

St Louis

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE Kingshighway and Euclid Avenue—Organized in 1842 as the Medical Department of St Louis University In 1835 it was chartered as an independent institution under the name of St Louis Medical College The first class graduated in 1843 In 1891 it became the Medical Department of Washington University In 1899 it absorbed the Missouri Medical College The faculty comprises 33 professors and 96 lecturers instructors etc a total of 129 Two full years of college work are required for admission including courses in English physics chemistry and biology and a reading knowledge of German The course is four years of eight months each The total fees for the four years are respectively, $221 $216 $216 and $221 The Dean is Dr Nathaniel Allison The total registration for 1919 1920 was 163 graduates 43 The next session begins Sept 23, 1920 and ends June 9 1921

ST LOUIS UNIVERSITY SCHOOL OF MEDICINE 1402 South Grand Avenue—Organized in 1901 as the Marion Sims Beaumont Medical College by union of Marion Sims Medical College organized in 1890 and Beaumont Hospital Medical College organized in 1886 First class graduated in 1902 It became the Medical Department of St Louis University in 1903 The faculty is composed of 46 professors 86 lecturers and assistants a total of 132 One year of college subjects preliminary to the four years of medical subjects is given in the medical school Two years of collegiate work are required for admission The curriculum covers four years of thirty two weeks each Summer semester optional The total fees are $200 each year The Dean is Dr Hanau W Loeb The total registration for 1919 1920 was 251 graduates 63 *The next session begins Oct 1 1920, and ends May 31 1921*

ST LOUIS COLLEGE OF PHYSICIANS AND SURGEONS Jefferson and Gamble Streets—Organized in 1869 Classes graduated in 1870 and each subsequent year until 1873 when it suspended Reorganized in 1879 Classes graduated in 1880 and subsequent years until 1915 when it merged with the Medical Department of the National University of Arts and Sciences Reestablished in 1916 The Dean is Dr Waldo Briggs Registration during 1919 1920 was 144 graduates 42. The next session begins Oct 1 1920 and ends June 3 1921 *This college is reported as not recognized by the licensing boards of Missouri and forty other states*

NEBRASKA

Nebraska, population 1,296,877 has two medical colleges, The University of Nebraska College of Medicine and the John A Creighton Medical College of Omaha, population 191,601 *

Omaha

JOHN A CREIGHTON MEDICAL COLLEGE Fourteenth and Davenport Streets—It is the Medical Department of Creighton University Organized in 1892 The first class graduated in 1893 It has a faculty of 40 professors and 16 associates lecturers and assistants a total of 56 Two years of collegiate work are required for admission The course of study embraces four years of eight months each Continuous session adopted for seniors only The total fees each year for the four years are respectively $175, $165 $165 and $170 The Dean is Dr Hermann von Schulte Total registration for 1919 1920 was 99 graduates 23 The thirty ninth session begins Sept 20 1920 and ends June 4 1921

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE Forty Second Street and Dewey Avenue—Organized in 1881 as the Omaha Medical College The first class graduated in 1882 It became the Medical Department of Omaha University in 1891 In 1902 it affiliated with the University of Nebraska with the present title The first two years were given at Lincoln and the last two in Omaha until 1913 when all four years were transferred to Omaha The faculty is composed of 21 professors and 67 lecturers and instructors total 88 Two years of collegiate work are required for admission including courses in physics chemistry zoology and a modern language The fees for each of the four years respectively are $140 $120 $110 and $110 The Dean is Dr Irving S Cutter Total registration for 1919 1920 was 184 graduates 42 The next session begins Sept 17 1920 and ends June 4 1921

NEW HAMPSHIRE

New Hampshire, population 446 352 has one medical college located at Hanover population 2 075

To be eligible for license to practice medicine in New Hampshire all students matriculating in and after the session of 1915-16 in addition to a four-year high school education, must have completed at least two years of work in an approved college of liberal arts prior to beginning the study of medicine

DARTMOUTH MEDICAL SCHOOL—Organized as New Hampshire Medical Institute in 1797 The first class graduated in 1798 It is under the control of the trustees of Dartmouth College Clinical teaching was discontinued in 1914 The faculty is made up of 10 professors and 2 instructors a total of 1 Two years of collegiate work are required for admission The course covers nine calendar months in each year or eight months of actual teaching Candidates for the A B or B S degree in Dartmouth College may substitute the work of the first year in medicine for that of the senior year in the academic department The fees for each year are $200 Dean Dr John M Gile Secretary Colin C Stewart The total registration for 1919 1920 was 41 The next session opens Sept 23 1920 and ends June 22, 1921

NEW YORK

New York State population 10 646 089 has nine medical colleges Five of these College of Physicians and Surgeons (Columbia University) Cornell University Medical College the University and Bellevue Hospital Medical College Long Island College Hospital New York Homeopathic Medical College and Flower Hospital and Fordham University School of Medicine are located in New York City population 5 621,151 * Albany Medical College is located in Albany a city of 113 344 * people The University of Buffalo Medical Department is situated in Buffalo population 505 875 * The College of Medicine Syracuse University is in Syracuse, a city of 171 647 * inhabitants

To be eligible to receive a license to practice in New York students matriculating in 1918-19 and thereafter must have completed two years of college work before entering on the study of medicine This applies to graduates of 1922 and thereafter

Albany

ALBANY MEDICAL COLLEGE 58 64 Eagle Street—Organized in 1838 The first class graduated in 1839 It became the Medical Department of Union University in 1873 In 1915 Union University assumed educational control The faculty is composed of 25 professors and 42 instructors assistants etc a total of 67 Two years of collegiate work including college courses in physics chemistry (including organic) biology English and a modern foreign language are required for admission The curriculum covers four years of eight months each *The charge for tuition is $200 a year and $5 for matriculation* There are no extra fees except for rental of microscopes laboratory breakage and certain expensive supplies The Dean is Dr Thomas Ordway The total registration for 1919 1920 was 82 graduates 21 The ninetieth session begins Sept 20 1920 and ends June 1 1921

Buffalo

UNIVERSITY OF BUFFALO MEDICAL DEPARTMENT High Street near Main—Organized in 1846 The first class graduated in 1847 It absorbed the Medical Department of Niagara University in 1898 The faculty is composed of 38 professors and 74 lecturers assistants etc a total of 112 Two years of collegiate work including college courses in physics chemistry biology English and French or German are required for admission The course covers four years of eight months each The total fees for each of the four years are $240 matriculation fee $5 The Dean is Dr C Sumner Jones Total registration for 1919 1920 was 211 graduates 57 The seventy fifth session begins Sept 20 1920 and ends June 3 1921

New York

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS 437 West Fifty Ninth Street—Organized in 1807 by the regents of the University of the State of New York as their medical department The first class graduated in 1811 In 1860 it became by affiliation the Medical Department of Columbia College It was made a permanent part of Columbia College by legislative enactment in 1891 That institution became Columbia University in 1896 The faculty is composed of 95 professors and 184 instructor demonstrators etc a total of 279 Two years of collegiate work including courses in physics chemistry biology English and either French or German are required for admission The work covers four years of eight months each The Dean is Dr William Darrach The total fees for the four years respectively are $250 $250 $330 and $352 Total registration for 1919 1920 was 17 graduates 101 The one hundred and thirteenth session begins Sept 22 1920 and ends June 1 1921

CORNELL UNIVERSITY MEDICAL COLLEGE First Avenue and Twenty Eighth Street New York City and Ithaca—Organized in 1898 The first class was graduated in 1899 The work of the first year may be taken either in Ithaca or New York *The faculty is composed of* 51 professors and 101 assistants lecturers instructors etc a total of 152 All candidates for admission must be graduates of approved colleges or scientific schools or seniors of approved colleges which will permit them to substitute the first year of this medical school for the fourth year of their college course and will confer on them the Bachelor degree on the completion of the years work The candidate must already have such knowledge of physics inorganic chemistry and biology as may be obtained in college by a years course in these subjects when accompanied by laboratory work The fees for each of the four years are respectively $340 $335 $330 and $320 The Dean is Dr Walter L [illegible] Total registration for 1919 1920 was 260 graduates [illegible] The twenty third session begins Sept 27 1920 and ends [illegible] 9

FORDHAM UNIVERSITY SCHOOL
Fordham Road—Organized in 1[illegible]

John's College Present title assumed in 1907 First class graduated in 1909 The faculty consists of 35 professors and 41 lecturers and assistants a total of 76 The college was suspended by the trustees in 1919 but is continuing for two sessions to permit the students already enrolled to finish their medical training Its last class will graduate in 1921 The total registration for 1919 1920 was 118 graduates 54 The next session begins Sept 24 1920 and ends June 15 1921

LONG ISLAND COLLEGE HOSPITAL 350 Henry Street Brooklyn — Organized in 1858 The first class graduated in 1860 It has a faculty of 44 professors and 90 assistants instructors etc a total of 134 Two years of collegiate work including college courses in physics chemistry and biology are required for admission The course covers four years of eight months each The fees are $350 annually The Dean is Dr Otto V Huffman Total registration for 1919 1920 was 340 graduates 76 The sixty third session begins Sept 27 1920, and ends May 31 1921

NEW YORK HOMEOPATHIC MEDICAL COLLEGE AND FLOWER HOSPITAL Eastern Boulevard between Sixty Third and Sixty Fourth Streets — Organized in 1858 Incorporated in 1860 as the Homeopathic Medical College of the State of New York The title New York Homeopathic Medical College was assumed in 1869 Present title assumed in 1908 The first class graduated in 1861 The course covers four years of eight months each It has a faculty of 34 professors and 27 lecturers and assistants The total fees for the four years respectively are $250 $245 $220 and $230 Total registration for 1919 1920 was 142 graduates 42 The sixty first session begins Sept 6 1920 and ends May 21 1921

UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE 338 East Twenty Sixth Street—Organized in 1898 by the union of the New York University Medical College organized in 1841 and the Bellevue Hospital Medical College organized in 1861 It is the Medical Department of New York University First class graduated in 1899 The faculty is composed of 65 professors and 106 instructors etc in all 171 The course covers four years of eight months each Entrance requirements are two years of collegiate work in addition to a standard four year high school course including college courses in physics chemistry and biology The fees for each of the four years are respectively $270 $270 $270 and $295 The Dean is Dr Samuel A Brown Total registration for 1919 1920 was 465 graduates 103 The next session begins Sept 15 1920 and ends June 7 1921

Syracuse

SYRACUSE UNIVERSITY COLLEGE OF MEDICINE 307 311 Orange Street— Organized in 1872 when the Geneva Medical College chartered in 1834 was removed to Syracuse under the title The College of Physicians and Surgeons of Syracuse University Present title assumed in 1875 when a compulsory three year graded course was established The first class graduated in 1873 and a class graduated each subsequent year In 1889 the amalgamation with the university was made complete Course extended to four years in 1896 Two years of a recognized college course are required for admission The course covers four years of thirty five weeks each The fees are $217 annually graduation fee $10 The faculty is composed of 35 professors and 66 associate and assistant professors lecturers and instructors The Dean is Dr John L Heffron The total enrolment for 1919 1920 was 147 graduates 36 The fiftieth session begins Sept 14 1920 and ends June 8 1921

NORTH CAROLINA

North Carolina population 2 466 025 has two medical schools each of which gives only the first two years of the medical course The School of Medicine of the University of North Carolina is located at Chapel Hill population 1 149 Wake Forest College School of Medicine is at Wake Forest, population 1 443

To be eligible for a license to practice medicine in North Carolina graduates of 1918 and 1922 must have completed respectively one year and two years of college work including courses in physics, chemistry and biology in addition to 14 units of high school work before beginning the study of medicine

Chapel Hill

UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE —Organized in 1890 Until 1902 this school gave only the work of the first two years when the course was extended to four years by the establishment of a department at Raleigh The first class graduated in 1903 A class was graduated each subsequent year including 1910 when the clinical department at Raleigh was discontinued Two years of collegiate work are required for admission The faculty is composed of 13 professors and 11 lecturers assistants etc a total of 24 The fees for each year are $150 The Dean is Dr I H Manning The total registration for 1919 1920 was 62 The thirty fifth session begins Sept 23 1920 and ends June 10 1921

Wake Forest

WAKE FOREST COLLEGE SCHOOL OF MEDICINE —This school was organized in 1902 The faculty including the professors of chemistry physics and biology numbers 10 Only the first two years of the medical course are offered after the completion of freshman and sophomore college work and on this combined course the B S degree is conferred Each annual course extends over nine months The fees for each year aggregate $120 The Secretary is E B Earnshaw The total registration for 1919 1920 was 45 The nineteenth session begin Sept 7 1920 and ends May 27 1921

Figures from 1920 Census return

NORTH DAKOTA

North Dakota, population 791,437, has one medical college, the School of Medicine of the University of North Dakota, which is situated at University, a suburb of Grand Forks a city of 13 950* people It gives only the first two years of the medical course

Candidates for license to practice medicine in North Dakota who graduated in 1912 and thereafter, in addition to a four-year high school education, must have completed two years of work in an approved college of liberal arts including courses in Latin, physics, chemistry, botany and zoology, prior to beginning the study of medicine Beginning in 1918 every applicant for a license must show evidence of having spent at least one year as an intern in a hospital

University

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE —Organized in 1905 Offers only the first two years of the medical course Two years work in a college of liberal arts is required for admission The fees are about $85 each year The faculty consists of 6 professors and 9 instructors a total of 15 The Dean is Dr Harley E French The total registration for 1919 1920 was 31 The fifteenth session begins Sept 20 1920 and ends June 14 1921

OHIO

Ohio population 5 273 814, has five medical colleges Two of these the Medical College of the University of Cincinnati and the Eclectic Medical College, are located in Cincinnati a city of 401 247* inhabitants Cleveland population 796 836* contains one medical school Western Reserve University School of Medicine Columbus population 237,031,* contains the two departments of the Ohio State University, the College of Medicine and the College of Homeopathic Medicine

Cincinnati

UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE Eden Avenue Cincinnati General Hospital—Organized in 1909 by the union of the Medical College of Ohio (founded in 1852) and the Miami Medical College (founded in 1819) with the Miami Medical College also Medical Department of the University of Cincinnati in 1896 Under a similar agreement March 2 1909 the title of Ohio Miami Medical College was taken Present title assumed merged into the University when the Miami Medical College in 1839 College of the University of Cincinnati was made complete Course in 1915 Two years of college work are required for admission The faculty consists of 55 professors 121 associates assistants etc a total of 176 The course covers four years of eight month each The fees for each of the four years respectively are $260 $210 $160 and $180 The Acting Dean is Dr John C Oliver The total registration for 1919 1920 was 221 graduates 44 The next session beings Oct 5 1920 and ends June 18 1921

ECLECTIC MEDICAL COLLEGE 630 West Sixth Street —Organized in 1833 at Worthington as the Worthington Medical College. Removed to Cincinnati in 1843 In 1845 it was chartered as the Eclectic Medical Institute In 1857 the American Medical College organized in 1839 was merged into it and in 1859 the Eclectic College of Medicine and Surgery organized in 1856 was merged into it In 1910 it assumed its present title Classes were graduated in 1833 and in all subsequent years except 1839 to 1843 inclusive It has a faculty of 29 professors and 10 lecturers and assistants a total of 39 Two years of college work are required for admission The course covers four years respectively are $160 months each The total fees for the four years respectively are $150 $150 and $150 The Secretary is Dr John K Scudder Total registration for 1919 1920 was 93 graduates 32 The next session begins Sept 16 1920 and ends May 16 1921

Cleveland

WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE 1353 East Ninth Street —Organized in 1843 as the Cleveland Medical College The first class graduated in 1844 It assumed the present title in 1881 In 1910 it absorbed the Cleveland College of Physicians and Surgeons The faculty includes 18 professors and 108 lecturer assistants etc a total of 126 The curriculum embraces four years of eight and one half months each Three years of college work are required for admission The total fees for each of the four years are respectively $225 $210 $204 and $205 The Dean is Dr C A Hamann The total registration for 1919 1920 was 178 graduates 48 The seventy eighth session begins Sept 30 1920 and ends June 16 1921

Columbus

OHIO STATE UNIVERSITY COLLEGE OF MEDICINE 710 North Park Street —Organized in 1907 as the Starling Ohio Medical College by the union of Starling Medical College (organized 1890) with the Ohio Medical University (organized 1847) In 1914 it became an integral part of the Ohio State University with its present title The faculty consists of 30 professors and 61 lecturers demonstrators etc a total of 91 Two years of collegiate work are required for admission The course covers four years of eight months each Tuition fees are $152 each year for residents of Ohio for nonresidents the fees are $202 The Dean is Dr Eugene F McCampbell The total registration for 1919 1920 was 150 graduates 23 The next session begins Sept 14 1920 and ends June 14 1921

OHIO STATE UNIVERSITY COLLEGE OF HOMEOPATHIC MEDICINE.—Organized in 1914 when the property of the Cleveland Pulte Medical College of Cleveland was transferred to the Ohio State University. The faculty numbers 21. Two years of college work are required for admission. The students are taught largely in the same classes and by the same teachers as students of the College of Medicine during the first two years and the tuition fees are the same. The Dean is Dr. Claude A. Burrett. The total registration for 1919-1920 was 26; graduates 1. The sixth session begins Sept. 14, 1920 and ends June 14, 1921.

OKLAHOMA

Oklahoma, population 2,377,629, has one medical college, the School of Medicine of the University of Oklahoma. The work of the first and second years is given in the academic laboratories at Normal, a city of about 4,000 inhabitants. The work of the third and fourth years is given in Oklahoma City, which has a population of 91,258* and which is eighteen miles north of Norman.

To be eligible for license to practice medicine in Oklahoma, all students matriculating in 1914-15 and in 1917-18, in addition to a four-year high school education, must have completed, respectively, one year and two years of work in an approved college of liberal arts including courses in physics, chemistry, biology and a modern language prior to beginning the study of medicine.

Norman and Oklahoma City

UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE.—Organized in 1900. Gave only the first two years of the medical course at Norman until 1910 when a clinical department was established at Oklahoma City. It has a faculty of 38 professors and 28 instructors; a total of 66. Two years of collegiate work are required for admission. The course is four years of nine months each. An optional course of six years is offered for the degree of B.S. and M.D. The total fees for the four years are respectively $70, $40, $40 and $45. The Dean is Dr. Leroy Long, 325 East Fourth Street, Oklahoma City. The total registration for 1919-1920 was 86; graduates 15. The session begins Sept. 16, 1920 and ends June 7, 1921.

OREGON

Oregon population 888,243, has one medical college, the University of Oregon Medical School, located in Portland, a city of 258,288* population.

Portland

UNIVERSITY OF OREGON MEDICAL SCHOOL, Marquam Hill.—Organized in 1887. The first class graduated in 1888. A class graduated each subsequent year except 1898. Became an integral part of the University of Oregon in 1910. The Willamette University Medical Department was merged in 1913. It has a faculty of 16 professors and 88 lecturers, assistants, etc.; a total of 104. Entrance requirements are two years of college work or its equivalent. The course is four years of eight months each. The total fees for the four years are respectively $165, $160, $160 and $160. The Dean is Dr. Richard B. Dillehunt. The total registration for 1919-1920 was 103; graduates 14. The thirty-fourth session begins Oct. 1, 1920 and ends May 31, 1921.

PENNSYLVANIA

Pennsylvania, population 8,798,067, has six medical colleges. Of these, Philadelphia, having a population of 1,823,158,* contains five, as follows: University of Pennsylvania School of Medicine, Jefferson Medical College, Hahnemann Medical College and Hospital, Woman's Medical College of Pennsylvania and Temple University Department of Medicine. The other school, the School of Medicine of the University of Pittsburgh, is situated in Pittsburgh, a city of 588,193.*

To be eligible for license to practice medicine in Pennsylvania students matriculating in the session of 1914-15 and thereafter, in addition to a four-year high school education must have completed a year's work either in an approved college of liberal arts or a preliminary year in the medical college, including college courses in physics, chemistry and biology, before beginning the study of medicine. He must also have completed an internship of at least one year in an approved hospital.

Philadelphia

UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE. Thirty-Sixth Street and Hamilton Walk.—Organized in 1765. Classes were graduated in 1768 and in all subsequent years except 1772-79 inclusive. The original title was the Department of Medicine, College of Philadelphia. The present title, School of Medicine of the University of Pennsylvania, was adopted in 1909. It granted the first medical diploma issued in America. In 1916 it took over the Medico-Chirurgical College of Philadelphia to develop it as a graduate school. The faculty consists of 56 professors, associate, adjunct and assistant professors and 154 lecturers, associates, instructors, etc.; a total of 210. The minimum requirements for admission are a standard four-year high school course or its equivalent plus two years of work in an approved college of arts and science including courses in French or German and in physics, chemistry and general biology or zoology with appropriate laboratory exercise. The first and second year classes are limited to 100 students; third and fourth to 125 each. The course embraces four years of study of thirty-four weeks each. The total fee for each of the four years are respectively $343, $320, $320 and $324. The Dean is Dr. William Pepper. Total registration for 1919-1920 was 454; graduates 151. The one hundred and fifty-fifth session begins Sept. 24, 1920 and ends June 1, 1921.

JEFFERSON MEDICAL COLLEGE, Tenth and Walnut Streets.—Organized in 1825 with its present title as the Medical Department of Jefferson College, Cannonsburg, Pa. Classes have been graduated annually since 1826. In 1838 a separate university charter was granted without change of title since which time it has continued under the direction of its own board of trustees. It has a faculty of 43 professor, associate and assistant professors and 124 associates, lecturers, demonstrators and instructor; a total of 167. Entrance requirements are a completed standard four-year high school or college preparatory course or the equivalent and in addition two years of work leading to a degree in an approved college of arts and science amounting to at least 60 semester hours including specified courses in physics, general and organic chemistry and biology with laboratory work in each subject. The course of study covers graded work of four years of eight and a half months each. The fees are about $320 each year with a matriculation fee of $5 paid on admission. The Dean is Dr. Ro[illegible] V. Patterson. The total registration for 1919-1920 was 522; graduates 165. The ninety-sixth session begins Sept. 22, 1920 and end June 4, 1921.

WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA, Twenty-First and N. College Avenue.—Organized in 1850. Classes were graduated in 18[illegible]2 and in all subsequent years except 1862. It has a faculty of 14 professors and 46 assistant lecturers, etc.; in all 60. Entrance requirements are a completed course in a standard secondary school and in addition two years of collegiate work including courses in physics, chemistry, biology and two foreign languages, one of which must be French or German. The curriculum covers four years of eight months each. Fees for each of the four years are respectively $198, $202, $184 and $179.50. The Dean is Dr. Martha Tracy. The total registration for 1919-1920 was 89; graduates 12. The eighty-fir[illegible]e[illegible]ion begins Sept. 29, 1920 and ends June 15, 1921.

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA, 230-24 North Broad Street.—Organized in 1848 as the Homeopathic Medical College of Pennsylvania. In 1869 it united with the Hahnemann Medical College of Philadelphia, taking the latter title. Assumed present title in 1885. The first class graduated in 1849. Entrance requirement are a completed course in a standard secondary school and in addition two years devoted to a college course including English and either French, German or Spanish, physics, chemistry and biology. It has a faculty of 33 professors and 62 lecturers, instructors, etc.; in all 95. The work covers four years of eight and a half months each. Total fees for each of the four years respectively are $230, $232, $232 and $250. The Dean is Dr. William A. Pearson. The total registration for the college year 1919-1920 was 130; graduates 37. The seventy-third session begins Sept. 27, 1920 and ends May 31, 1921.

THE TEMPLE UNIVERSITY DEPARTMENT OF MEDICINE, Eighteenth and Buttonwood Streets.—Organized in 1901. The first class graduated in 1904. The faculty numbers 102. Two years of college work are required for admission. The fees for each of the four years respectively are $175, $171, $160 and $170. The Dean is Dr. Frank C. Hammond. The total registration for 1919-1920 was 114; graduates 23. The twentieth session begins Sept. 20, 1920 and ends June 1, 1921.

Pittsburgh

UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE, Bigelow Boulevard.—Organized in 1886 as the Western Pennsylvania Medical College and in 1908 became an integral part of the University of Pittsburgh, removing to the university campus in 1910. The first class graduated in 1887. The faculty is composed of 15 professors and 105 associates, assistants, etc.; 120 in all. Entrance requirements are two years of recognized college work to have included essentially courses in *English, chemistry (inorganic and organic), physics, biology* and a reading knowledge of French or German, Italian or Spanish. The course of study is four years of eight and a half months each. The tuition fee is $310 a year; matriculation fee $5; diploma fee $10. The Dean is Dr. Raleigh R. Huggins. The total registration for 1919-1920 was 147; graduates 31. The thirty-fifth session begins Sept. 27, 1920 and ends June 15, 1921.

SOUTH CAROLINA

South Carolina population 1,660,934 has one medical college situated in Charleston a city of 60,734 people.

Graduates of 1922 (matriculants of 1918-19) and thereafter to be eligible for license to practice medicine in South Carolina must have completed in addition to 14 units of high school work two years in an approved college, including courses in English, physics, chemistry and biology.

Charleston

THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, 16 [illegible] Street.—Organized in 182[illegible] as the Medical College of S[illegible]th Carolina. The first class graduated in 18[illegible]. In 18[illegible] a medical college bearing the present title was chartered and the two schools combined as [illegible] institutions until they were merged in 1838. Classes were g[illegible]d in all years except 1862 to 1865 inclusive. In 1913 by legislative enactment it became a state institution. It has a faculty of 37 professors and 28 lecturers, instructors, etc.; a total of 65. The course covers four

years of eight months each Two years of collegiate work including courses in physics chemistry biology and a modern foreign language are required for admission in addition to a standard high school preparation The total fees are $150 annually The Dean is Dr Robert Wilson Jr Total enrolment for 1919 1920 was 65 graduates 14 The ninety second session begins Sept 24 1920 and ends June 2 1921

SOUTH DAKOTA

South Dakota, population 735,434, has one medical college, the University of South Dakota College of Medicine, located at Vermilion, a town of 2,590 * people

To be eligible for license to practice medicine in South Dakota, graduates of 1915 and thereafter must show that they matriculated in and graduated from medical colleges which required at least two years of collegiate work for admission, including courses in physics, chemistry, biology and a modern language This affects all students who matriculated in the session of 1911-1912 and thereafter

Vermilion

UNIVERSITY OF SOUTH DAKOTA COLLEGE OF MEDICINE—Organized in 1907 Offers only the first two years of the medical course Two years work in a college of liberal arts are required for admission The fees are $60 each year The faculty numbers 8 The Dean is Christian P Lommen B S The total registration for 1919 1920 was 23 The fourteenth session begins Sept 27 1920, and ends June 25 1921

TENNESSEE

Tennessee, population 2,321 253, has four medical colleges Of these, Vanderbilt University Medical Department and Meharry Medical College are situated in Nashville a city with a population of 118,342 * The College of Medicine of the University of Tennessee and the University of West Tennessee College of Medicine and Surgery are located in Memphis, population 162 351 *

To be eligible for a license to practice medicine in Tennessee, students matriculating in the session of 1914-1915 and of 1918-1919 must have completed respectively, one year of collegiate work, including courses in physics, chemistry, biology and a modern language, in addition to a four-year high school course before entering on the study of medicine

Memphis

UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE three buildings 879 Madison Avenue—Organized in 1876 at Nashville as Nashville Medical College First class graduated 1877 and a class graduated each subsequent year Became Medical Department of University of Tennessee 1879 In 1909 it united with the Medical Department of the University of Nashville to form the joint Medical Department of the Universities of Nashville and Tennessee This union was dissolved in 1911 The trustees of the University of Nashville by formal action of that board named the University of Tennessee College of Medicine as its legal successor In 1911 it moved to Memphis where it united with the College of Physicians and Surgeons The Memphis Hospital Medical College was merged in 1913 Lincoln Memorial University Medical Department was merged in 1914 The faculty includes 54 professors and 53 assistants instructors etc a total of 107 Entrance requirements are a completed secondary education plus two years of collegiate work Students taking the two year premedical course in Knoxville may secure the B S and M D degrees The total fees for the four years respectively are $107 $102 $102 and $127 for bona fide residents of the state and $50 more each year for nonresidents The Dean is Dr McIver Woody Total registration for 1919 1920 was 50 graduates 15 The next session begins Sept 25 1920 and ends June 7 1921

UNIVERSITY OF WEST TENNESSEE MEDICAL DEPARTMENT Colored 1190 South Phillips Place—Organized in 1900 The first class graduated in 1904 and a class graduated each subsequent year Total registration for 1919 1920 was 10 graduates 1 *Official reports indicate that the diplomas of this college are not recognized by the licensing boards of Tennessee and forty one other states*

Nashville

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE—This school was founded in 1874 The first class graduated in 1875 The faculty consists of 42 professors and 37 lecturers a total of 79 One year of collegiate work is required for admission The course covers four years of nearly eight and a half months each The total fees for the four year respectively are $160 $160 $160 and $185 The Dean is Dr G Canby Robinson The total registration for 1919 1920 was 122 graduates 29 The forty seventh session begins Sept 27 1920 and ends June 8 1921

MEHARRY MEDICAL COLLEGE Colored 1118 First Avenue South —This school was organized in 1876 as the Medical Department of Central Tennessee College which became Walden University in 1900 First class graduated in 1877 Obtained new charter independent of Walden University in 1916 The faculty is made up of 13 professors and 17 instructors demonstrator etc 30 in all The work embraces four years of thirty weeks each The total fees for each of the first three years are $87 and for the fourth years $97 The President is Dr George W Hubbard Total registration for 1919 1920 was 185 graduates 39 The forty fifth session begins Oct 5, 1920 and ends May 19, 1921

* Figures from the 1920 Census returns

TEXAS

Texas, population 4 601,279, has two medical colleges The University of Texas Department of Medicine is located at Galveston, a city of 41,863 inhabitants The Baylor University College of Medicine is located in Dallas, population 158,976 *

To be eligible for a license to practice medicine in Texas, students matriculating in the session of 1914-1915 and thereafter must have completed a year of collegiate work, including courses in physics, chemistry, biology and modern language, in addition to a standard four-year high school course, before entering on the study of medicine

Dallas

BAYLOR UNIVERSITY COLLEGE OF MEDICINE 720 College Avenue—Organized in 1900 as the University of Dallas Medical Department. In 1903 it took its present name and became the Medical Department of Baylor University at Waco It acquired the charter of Dallas Medical College in 1904 The first class graduated in 1901 The faculty numbers 54 Entrance requirement is one year of college work in addition to a four year high school education For the session of 1918 19 and thereafter two years of collegiate work will be required for admission The course is four years of eight months each The fees for each of the four years respectively are $165 $160 $160 and $150 The Dean is Dr L H Cary Total registration for 1919 1920 was 141 graduates 33 The twenty first session begins Sept 27 1920 and ends May 26 1921

Galveston

UNIVERSITY OF TEXAS DEPARTMENT OF MEDICINE Avenue B between Ninth and Tenth Streets—Organized in 1891 The first class graduated in 1892 It has a faculty of 23 professors and 19 lecturers and instructors a total of 42 The curriculum embraces four years of eight months each The entrance requirement is two years of collegiate work in addition to a four year high school education The total fees for the four years respectively are $78 $48 $30 50 and $20 50 for *residents of the* state $150 each year additional for non residents The Dean is Dr William S Carter Total registration for 1919 1920 was 219 graduates 51 The thirtieth session begins Oct 1 1920, and ends May 31 1921

UTAH

Utah population 453,648 has one medical college, the School of Medicine of the University of Utah, situated at Salt Lake City which has 118,110 * people

To be eligible to secure licenses to practice medicine in Utah students matriculating in and after the session of 1912-1913 in addition to a four-year high school education, must have completed at least one year of collegiate work prior to beginning the study of medicine this preliminary college work to have included college courses in physics, chemistry and biology

Salt Lake City

UNIVERSITY OF UTAH SCHOOL OF MEDICINE—Organized in 1906 Gives only first two years of medical course Each course covers thirty six weeks Two years of collegiate work are required for admission The medical faculty consists of 11 professors and 13 lecturers and assistants a total of 24 The fees are $110 each year The Dean is Dr Perry G Snow Total registration for 1919 1920 was 36 The fourteenth session begins Sept 28 1920 and ends June 5 1921

VERMONT

Vermont, population 366 192, has one medical school, located at Burlington a town of 22 779 * people

Students matriculating in and after the sessions of 1912-1913 and 1918 1919 who desire to practice medicine in Vermont must have obtained a preliminary training, respectively, of one year and of two years of collegiate work, in addition to a standard four-year high school education, this additional years work to include college courses in physics, chemistry and biology

Burlington

UNIVERSITY OF VERMONT COLLEGE OF MEDICINE Pearl Street College Park—Organized with complete course in 1822 Classes graduated in 1823 to 1836 inclusive when the school was suspended It was reorganized in 1853 and classes were graduated in 1854 and in all subsequent years The faculty numbers 41 Two years of college work in addition to a four year high school education are required for admission The course of study covers four years of nine months each Continuous session for seniors only The total fees for each of the first three years are $145 and $170 for the fourth year The Dean is Dr H C Tinkham The total registration for 1919 1920 was 103 graduates 22 The next session begins Sept 22 1920 and ends June 20 1921

VIRGINIA

Virginia, population 2,234,030, has two medical colleges, one, the Department of Medicine of the University of Virginia, situated in Charlottesville, population 10,688,* and the Medical College of Virginia at Richmond, population 156,687. Only graduates of medical colleges registered by the Virginia State Board of Medical Examiners are eligible to obtain licenses to practice medicine in this state. Medical colleges to be so registered must require of all students admitted in the session of 1914-1915, completion of at least one year, and in the session of 1917-1918 and thereafter two years of collegiate work, including courses in physics, chemistry, biology and a modern language, preferably German, in addition to a four-year high school education.

Charlottesville

UNIVERSITY OF VIRGINIA DEPARTMENT OF MEDICINE.—Organized in 1827. Classes were graduated in 1828 and in all subsequent years except 1865. It has a faculty of 22 professors and 23 lecturers, instructors, assistants, etc., a total of 45. The requirements for admission are the completion of a four-year high school course, or its equivalent, and two years of college work devoted to English, mathematics, chemistry, physics and biology, and French or German. Continuous session adopted for seniors only. Total fees for the four years respectively are $205, $207.50, $165 and $150. The Dean is Dr. Theodore Hough. The total registration for 1919-1920 was 103; graduates, 28. The ninety-second session begins Sept. 16, 1920, and ends June 15, 1921.

Richmond

MEDICAL COLLEGE OF VIRGINIA.—Marshall and College Streets.—Organized in 1838 as the Medical Department of Hampden-Sydney College. Present title was taken in 1854. In 1913 the University College of Medicine was merged. In 1914 the North Carolina Medical College was merged. Classes were graduated in 1840 and in all subsequent years. It has a faculty of 40 professors and 72 lecturers, instructors, etc., a total of 112. The requirement for admission is a four-year high school education and in addition two years of collegiate work, including courses in physics, chemistry, biology and French or German. The course embraces four years of eight months each. Total fees for the four years respectively are $210, $210, $210 and $240. The Dean is Dr. E. C. L. Miller. The total registration for 1919-1920 was 137; graduates, 23. The ninety-second session begins Sept. 15, 1920, and ends May 31, 1921.

WEST VIRGINIA

West Virginia, population 1,439,165, has one medical college, the School of Medicine of West Virginia University, which offers the first two years of the medical course. It is located at Morgantown, a city of 12,117* population.

Graduates of 1921 (matriculants of 1917-1918) and thereafter in order to secure licenses to practice medicine in West Virginia must have completed, in addition to a high school education, one year of collegiate work, including courses in physics, chemistry and biology, before entering on the study of medicine.

Morgantown

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE.—Organized in 1902 and gives only the first two years of the medical course. Two years of college work are required for admission and the Bachelor degree will be granted to those who finish the two years in medicine. Session extends through nine months. The faculty numbers 16. Fee: For residents of the state, $30 each year, for non-residents, $60. Cadets pay laboratory fees only. The Dean is Dr. John N. Simpson. The total registration for 1919-1920 was 53. The next session begins Sept. 20, 1920, and ends June 15, 1921.

WISCONSIN

Wisconsin, population 2,553,983, has two medical colleges: the Medical School of the University of Wisconsin, which teaches the first two years of the medical course and is located at Madison, a city of 38,378* people; and the Marquette University School of Medicine, located at Milwaukee, a city of 457,147* people.

To be eligible for licenses to practice medicine in Wisconsin, students matriculating in the session of 1915-1916 (graduates of 1919) and thereafter, prior to entering a medical school, must have completed, besides a four-year high school course, two years of collegiate work, including courses in physics, chemistry, biology and a modern language.

Madison

UNIVERSITY OF WISCONSIN MEDICAL SCHOOL.—Organized in 1907. Gives only the first two years of the medical course. The teaching of the third will be given in the fall of 1923 and of the fourth year in 1924. For matriculation at least two years in a college of arts and science or an equivalent training are required, including two years of Latin, a reading knowledge of French or German, and at least a year's work in physics, chemistry and biology. It has a faculty of 18 professors and 30 lecturers, instructors, etc., a total of 48. Tuition fees for residents of the state, $75 each year; for non-resident, $199. The Dean is Dr. Charles R. Bardeen. The registration for 1919-1920 was 141. The thirteenth session begins Sept. 23, 1920, and ends June 17, 1921.

Milwaukee

MARQUETTE UNIVERSITY SCHOOL OF MEDICINE.—Fourth Street and Reservoir Avenue.—Organized in December, 1912, by the merger of the Milwaukee Medical College and the Wisconsin College of Physicians and Surgeons. It has a faculty of 79. The entrance requirements are two years of college work, including courses in physics, chemistry, biology and a modern language. The curriculum is for four years of thirty-four weeks each. The total fees for each year are $250. The Dean is Dr. Louis F. Jermain. The registration for 1919-1920 was 103; graduates, 2. The ninth session begins Oct. 1, 1920, and ends June 14, 1921.

PHILIPPINE ISLANDS

The Philippine Archipelago, having a population of 9,009,802, has two medical colleges: the University of the Philippines College of Medicine and Surgery, and the Medical Faculty of the University of St. Thomas. They are located in the city of Manila, which in 1910 had a population of 234,489.

Manila

UNIVERSITY OF THE PHILIPPINES COLLEGE OF MEDICINE AND SURGERY, Manila.—Organized in 1907 as the Philippine Medical School, under the support of the government of the Philippine Islands. Present title in 1910. The faculty includes 34 professors and 36 lecturers, assistants, etc., a total of 70. Two years of collegiate work, leading to the degree of Bachelor of Arts, are required for admission. The course extends over five years of nine months each, with an additional sixth year of intern service. The Dean is Dr. Fernando Calderon. The total registration for 1919-1920 was 147; graduates, 28. The fourteenth session began July 1, 1920, and ends April 4, 1921.

CANADA

The Dominion of Canada has nine medical colleges, all but one of which require a five-year course including in the first year courses in physics, chemistry and biology. This course is practically equal to that in the colleges of the United States which require one year of college work for admission, including the science courses named. None of the Canadian colleges has a minimum requirement of two years of collegiate work, or its equivalent, preliminary to or as a part of the medical course. The medical school at Edmonton, Alberta, gives only the first two years of the medical course, or three years, including the preliminary science year.

Alberta

UNIVERSITY OF ALBERTA FACULTY OF MEDICINE, Edmonton.—Organized in 1913. Offers only the first four years of the six-year medical course, including the two preliminary science years. The faculty numbers 26. Fees for the first year are $64; for the second, third and fourth years, each $98. The registrar is Cecil F. Race, B.A. The registration for 1919-1920 was 135. The eighth session begins Sept. 27, 1920, and ends May 12, 1921.

Manitoba

UNIVERSITY OF MANITOBA FACULTY OF MEDICINE, Winnipeg.—Organized in 1883; first class graduated in 1886; and a class graduated each subsequent year. The faculty numbers 90. The total fees for the five years respectively are $175, $165, $170, $160 and $160. The entire course covers five years, the first year including premedical courses in physics, chemistry and biology. The Dean is Dr. S. Willis Lrovatt. Total registration for 1919-1920 was 219; graduates, 24. The next session begins Sept. 14, 1920, and ends April 15, 1921.

Nova Scotia

DALHOUSIE UNIVERSITY FACULTY OF MEDICINE, Halifax, N. S.—Organized in 1867. Incorporated as the Halifax Medical College in 1868. Reorganized as an examining faculty, separate from the Halifax Medical College, in 1875. In 1911, in accordance with an agreement between the Governors of Dalhousie University and the Corporation of the Halifax Medical College, the work of the latter institution was discontinued and a full teaching faculty was established by the University. By an arrangement between Dalhousie University and the Provincial Medical Board of Nova Scotia, the final professional examinations are conducted conjointly by the university and the Provincial Medical Board, graduates may qualify at the same time for their academic degree and the provincial license. [illegible] faculty of 40 professors, lecturers, demonstrators, etc. Preliminary and examinations, and a graded course of [illegible] medical course in physics, chemistry, [illegible]. The fees are $145 per each of the first [illegible] $125 each [illegible]. The total registration for 1919-1920 was [illegible]. The Dean is Dr. John Stewart. The next session [illegible] 29, 1920, and ends May 26, 1921.

Ontario

UNIVERSITY OF TORONTO FACULTY [illegible]
in 1843 as the Medical Faculty [illegible]
Regulations [illegible] in 1887. In 1919
Department of Medicine [illegible]

of study covers six years of eight months each the first two being devoted largely to physics chemistry biology and cultural courses in history science and English It has a faculty of 54 professors and 217 lecturers associates etc a total of 271 The fees are $160 each year graduation fee $20 The Dean is Dr A Primrose The total registration for 1919 1920 was 1 082 graduates 74 The next session begins Sept 28 1920 and ends May 31 1921

QUEEN'S UNIVERSITY FACULTY OF MEDICINE Kingston—Organized 1854 first class graduated in 1855 and a class graduated each subsequent year The faculty was originally a department of the university but a separation took place in 1866 when the school was conducted under the charter of the Royal College of Physicians and Surgeons at Kingston In 1892 the school again became an integral part of Queen's University The faculty includes 22 professors and 28 assistants instructors etc a total of 50 The fees for the six years are respectively $140 50 $140 50 $143 $144 $144 and $134 fee for M D C M degrees $30 The course covers six years of thirty teaching weeks each the first year including courses in physics chemistry biology English and French or German The total registration in 1919 1920 was 229 graduates 21 The Dean is Dr J C Connell The next session begins Sept 29 1920 and ends May 29 1921

WESTERN UNIVERSITY FACULTY OF MEDICINE London—Organized in 1881 first class graduated in 1883 and a class graduated each year subsequently The medical school has been under the control of the Board of Governors of the Western University since 1913 The faculty numbers 43 The course is six years of eight months each the first year including premedical courses in physics chemistry and biology The total fees for the six years respectively are $150 $145 $145 $153 $153 and $178 The Acting Dean is Dr Paul S McKibben Total registration for 1919 1920 was 119 graduates 11 The next session begins Oct 4 1920 and ends May 26 1921

Montreal

McGILL UNIVERSITY FACULTY OF MEDICINE—Founded 1824 as Montreal Medical Institution became the Medical Faculty of McGill University in 1829 first class graduated under the university auspices in 1833 No session between 1836 39 owing to political troubles In 1905 it absorbed the Faculty of Medicine of the University of Bishop College The course extends over six years of eight months each including the two preliminary years The faculty numbers 135 The total fees for each of the first five years are $167 sixth year $197 The Registrar total registration for 1919 1920 was 624 graduates 52 The Registrar is Dr John W Scane The next session begins Oct 1 1920 and ends June 6 1921

UNIVERSITY OF MONTREAL MEDICAL FACULTY Montreal—Organized in 1843 incorporated in 1845 as the Montreal School of Medicine and Surgery In 1891 by act of parliament the Medical Faculty of Laval University (organized in 1878) was absorbed Present name assumed in 1920 A class was graduated in 1843 and in each subsequent year The faculty numbers 80 The course extends over five years including premedical courses in physics chemistry and biology The total fees for the five years respectively are $110 $118 $126 $126 and $138 The Dean is Dr E P Lachapelle The total registration for 1919 1920 was 267 graduates 32 The next session begins Oct 3 1920 and ends June 30 1921

Quebec

LAVAL UNIVERSITY FACULTY OF MEDICINE Quebec—The Quebec School of Medicine organized in 1848 became in 1852 the Medical Department of Laval University first class graduated in 1855 and a class graduated each subsequent year The faculty numbers 35 The fees are $90 each year The course extends over five years the first year including courses in physics chemistry and biology The Dean is Dr Edwin Turcot Quebec Total registration for 1919 1920 was 149 graduates 25

THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

The requirements for admission to and graduation from colleges holding membership in this association are 15 units of high school work and two years (60 semester hours) of college work

CURRICULUM The entire course of four years shall consist of not less than 3 600 hours and shall be grouped in divisions and subdivided into subjects each division and each subject to be allotted approximately the number of hours and percentages of the whole shown in the following schedule

DIVISION I

ANATOMY 684 HOURS (19%) Minimum 50% of 3 600 Hours

1 Gross anatomy including clinical or applied anatomy
2 Microscopic anatomy
3 Embryology

DIVISION II

PHYSIOLOGY AND CHEMISTRY 468 HOURS (13%) 19%

1 Physiology
2 Biochemistry

DIVISION III

PATHOLOGY AND BACTERIOLOGY 468 HOURS (13%) 8%

1 Pathology including necropsies 5%
2 Bacteriology including serology and immunology
3 Preventive medicine and public health 8%

DIVISION IV

PHARMACOLOGY 216 HOURS (6%) 6%

1 Materia medica and pharmacy
2 Pharmacology

DIVISION V

MEDICINE AND MEDICAL SPECIALTIES 900 HOURS (25%)

1 General medicine including laboratory diagnosis 15 %
2 Pediatrics 4 %
3 Nervous and mental diseases 3½ %
4 Dermatology and syphilis 2 %
5 Medical jurisprudence ½ %

DIVISION VI

SURGERY AND SURGICAL SPECIALTIES 648 HOURS (18%)

1 Surgery 11 %
2 Orthopedic surgery 2 %
3 Urology 1 %
4 Ophthalmology 1½ %
5 Otology rhinology and laryngology 1½ %
6 Roentgenology 1 %

DIVISION VII

OBSTETRICS AND GYNECOLOGY 216 HOURS (6%)

1 Obstetrics including obstetric surgery 4 %
2 Gynecology 2 %

When teaching conditions demand it a subject may be transferred from one division to another

MEMBERS OF ASSOCIATION

University of Alabama School of Medicine
Leland Stanford Junior University School of Medicine
University of California Medical School Berkeley
University of Colorado School of Medicine
Yale University School of Medicine
Georgetown University Medical School
George Washington University School of Medicine.
Howard University School of Medicine.
Army Medical School
Navy Medical School
Emory University Medical Department
University of Georgia College of Medicine.
Northwestern University Medical School
Rush Medical College
University of Illinois College of Medicine.
Indiana University School of Medicine
University of Iowa College of Medicine
University of Kansas School of Medicine
University of Louisville Medical Department
Tulane University of Louisiana School of Medicine
Johns Hopkins University Medical Department
University of Maryland School of Medicine and College of Physicians and Surgeons
Medical School of Harvard University
Tufts College Medical School
Detroit College of Medicine and Surgery
University of Michigan Medical School
University of Minnesota Medical School
University of Mississippi Department of Medicine
St Louis University School of Medicine
University of Missouri School of Medicine
Washington University Medical School
John A Creighton Medical College
University of Nebraska College of Medicine
Columbia University College of Physicians and Surgeons
Cornell University Medical College
Fordham University School of Medicine
Long Island College Hospital
Syracuse University College of Medicine
University and Bellevue Hospital Medical College
University of Buffalo Department of Medicine
University of North Carolina School of Medicine
University of North Dakota School of Medicine
University of Cincinnati College of Medicine
Ohio State University School of Medicine
Western Reserve University School of Medicine
University of Oklahoma School of Medicine.
Hahnemann Medical College and Hospital
Jefferson Medical College
University of Pennsylvania School of Medicine
University of Pittsburgh School of Medicine
Woman's Medical College
University of the Philippines College of Medicine and Surgery
Medical College of the State of South Carolina
University of South Dakota College of Medicine
Meharry Medical College (Affiliated Member)
University of Tennessee College of Medicine
Vanderbilt University Medical Department
Baylor University School of Medicine
University of Texas Medical Department
University of Vermont College of Medicine
Medical College of Virginia
University of Virginia Department of Medicine.
Marquette University School of Medicine
University of Wisconsin Medical School

The secretary-treasurer of the Association is Dr Fred C Zapffe 3431 Lexington Street Chicago

HOSPITALS FURNISHING ACCEPTABLE INTERNSHIPS

(Revised to August 1, 1920)

The following general hospitals in Section I are considered in position to furnish acceptable internships for medical graduates The hospitals in Sections II and III offer opportunities for physicians who seek further training along certain specialties The internships in these hospitals, therefore should be considered as supplementary and should be based on an internship taken in a general hospital

There are other hospitals which are probably eligible for admission to this list but are omitted either because they have failed to supply information on which any decision regarding them might be based or because they have definitely stated that they do not use interns

SECTION I GENERAL HOSPITALS, TOTAL, 469, 2,960 INTERNSHIPS, BEDS, 103,997

Name of Hospital	Location	Number of Beds				Interns		Examined or Apply in	Length of Service	Out-Patient Service	Accident Cases	Necropsies	Med Library	Salary per Mo	Training School for Nurses
		Surgical	Medical	Other	Total	Number in Hospital	By Appt or Exam								
ALABAMA															
Hillman Hospital	Birmingham	100	60	40	200	8	Ex	March	1 yr	yes	yes	yes	no	no	yes
City Hospital	Mobile	60	60	40	135	3	Ap		1 yr	ye	yes	yes	no	no	yes
J A Andrews Memorial Hosp (colored)	Tuskegee Institute	yes	yes	yes	60	2	Ap	April	1 yr	yes	yes	ye	yes	$6	yes
ARIZONA															
Copper Queen Hospital	Bisbee	40	25	10	75	1	Ap	May	1 yr	yes	yes	yes	no	$40	no
St Joseph s Hospital	Phoenix	yes	yes	yes	100	1						no			yes
CALIFORNIA															
California Hospital	Los Angeles	100	25	50	175	1	Ap	June	1 yr	no	yes	no	yes	no	yes
Los Angeles County Hospital [1]	Los Angeles	350	800	120	1 270	30	1 y		18 mos	yes	no	yes	yes	no	yes
White Memorial Hospital	Los Angeles	yes	yes	yes	64	2	Ap	May	1 yr	yes	yes	yes	yes	$10	yes
Franklin Hospital	San Francisco	yes	yes	yes	200	3	Ap		1 yr	no	yes	yes	no	fees	ye
Hospital for Children	San Francisco	yes	yes	yes	200	7	Ap	Indef	1 yr	yes	no	yes	no	no	yes
Lane Hospital	San Francisco	50	40	105	200	14	Ap	May	1 yr	yes	few	yes	yes	fees	yes
Mount Zion Hospital	San Francisco	yes	yes	yes	150	2	Ap	May	1 yr	yes	ye	ye	yes	$ 5	ye
St n Francisco Hospital [1]	San Francisco	yes	yes	yes	600	28	Ap	May	1 yr	no	yes	yes	yes	$10	yes
Southern Pacific General Hospital [4]	San Francisco	120	120		240	7	Ap	May	1 yr	yes	yes	yes	yes	$ 0	yes
St Luke s Hospital	San Francisco	yes	yes	yes	150	6	Ap	May	1 yr	no	yes	yes	no	no	yes
United States Marine Hospital	San Francisco	yes	yes	yes	150	2	Ap	May	1 yr	yes	yes	yes	yes	yes	no
University of California Hospital [1]	San Francisco	50	49	109	208	14	Ap	May	1 yr	yes	few	yes	ye	no	yes
COLORADO															
University Hospital	Boulder	30	30	15	75	1	Ap		Indef	no	no	no	no		yes
St Francis Hospital	Colorado Springs	75	75		150	2	Ap	April	1 yr	no	yes	yes	yes	no	no
Children s Ho pital	Denver	50	50		100	2	Ap	April	1 yr	yes	yes	no	no	$	yes
Denver City and County Hospital [1]	Denver	100	100	200	400	10	Ap	†	12 mos	no	ye	yes	yes	$ 0	yes
Mercy Hospital	Denver	100	25	25	150	4	Ex		1 yr	no	ye	no	small	$	yes
St Anthony s Hospital	Denver	yes	yes	yes	175	2	1 y	April	1 yr	no	no	yes	no	no	no
St Joseph s Hospital	Denver	yes	yes	yes	250	3	Ap	April	1 yr	no	ye	yes	no	no	yes
St Luke s Hospital	Denver	140			140	4	Ap		1 yr	no	yes	yes	no	yes	ye
CONNECTICUT															
Bridgeport Hospital	Bridgeport	70	60	150	280	6	Ap	April	1 yr	no	yes	yes	no	$75	yes
St Vincent s Hospital	Bridgeport	100	50	250	400	4	Ap	April	12 mo	no	yes	yes	no	no	yes
Hartford Hospital	Hartford	180	171	162	513	10	Ex		20 mo	no	yes	yes	no	yes	yes
St Francis Hospital	Hartford	yes	yes	yes	400	6	1 y	April	2 mos	no	yes	few	no	yes	yes
Grace Hospital [1]	New Haven	52	28	0	100	2	Ap	April	1 yr	no	yes	ye	yes	$40 (a)	yes
Hospital of St Raphael	New Haven	60	60	30	150	2	Ex	Indef	16 mos	no	yes	ye	no	no	yes
New Haven Hospital	New Haven	75	60	125	260	9	Ap	June	1 yr	no	yes	yes	yes	no	yes
Wm W Backus Hospital	Norwich	yes	yes	yes	90	1	Ap	May	1 yr	yes	yes	yes	yes	$ 0 (a)	yes
St Mary s Hospital	Waterbury	40	40	40	120	2	Ap	May	1 yr	no	yes	few	no	$ 0 (a)	yes
Waterbury Hospital	Waterbury	50	42	83	180	2	Ap	May	1 yr	no	yes	yes	no	$ 0	yes
DELAWARE															
Delaware Hospital	Wilmington	60	40	80	180	4	Ex		1 yr	yes	ye	yes	no	no	yes
Homeopathic Hospital	Wilmington	33	22	30	90	1	Ap	Jan	1 yr	yes	ye	yes	yes	$100 (a b)	yes
DISTRICT OF COLUMBIA															
Central Disp and Emergency Hospital	Washington	yes	yes		150	7	Ex	Indef	1 yr	yes	ye	yes	no	no	ye
Columbia Hospital for Women	Washington	67		67	134	4	Ex	Indef	1 yr	yes	ye	ye	no	no	ye
Eastern Disp and Casualty Hospital	Washington	60	10	5	75	4	1 y		1 yr	yes	ye	no	no	no	yes
Freedmen s Hospital	Washington	148	75	55	278	11	Ex	§	1 yr	yes	yes	yes	no	no	yes
Garfield Memorial Hospital	Washington	yes	yes	yes	240	6	Ex	April	1 yr	yes	ye	no	no	$10	ye
Georgetown University Hospital	Washington	80	71	108	6	6	Ap	April	1 yr	yes	ye	yes	yes	no	ye
George Washington University Hospital	Washington	40	40	20	100	5	1 y	July	1 yr	yes	yes	yes	yes	$10	ye
Providence Hospital	Washington	170	122	49	300	6	Ap	May	1 yr	ye	ye	yes	yes	no	ye
Sibley Memorial Hospital	Washington	100	20	30	150	2	Ap	May	1 yr	yes	yes	yes	no	fees	yes
Washington Asylum Hospital	Washington	75	150	10	235	7	Ap	April	1 yr	no	yes	yes	no	fees	yes
FLORIDA															
St Luke s Hospital	Jacksonville	yes	yes	yes	125	2	Ap	April	16 mos	no	yes	yes	no	no	yes
Pensacola Hospital	Pensacola	yes	yes	yes	70	1	Ap								
GEORGIA															
Day s Fischer Sanatorium	Atlanta	yes	yes	yes	90	2	Ap			yes	ye	no	yes	no	yes
Georgia Baptist Hospital	Atlanta	yes	yes	yes	150	2	Ex	March	1 yr	no	ye	no	no	$	ye
Grady Memorial Hospital	Atlanta	100	50	50	200	15	Ex	*	1 yr	yes	yes	ye	no	$ 14	ye
Piedmont Sanatorium	Atlanta	yes	yes	yes	57	2	Ex	March	1 yr	no	few	no	ye	$13 yr	ye
St Joseph Infirmary	Atlanta	yes	yes	yes	100	3	Ap	March	2 yr	no	no	no	no	$10	ye
University Hospital	Augusta	yes	yes	yes	270	8	Ap	June	1 yr	ye	yes	ye	yes	no	
Macon Hospital	Macon	yes	yes	yes	150	3	Ap		2 yrs	yes	ye	ye	ye	no	ye
ILLINOIS															
Alexian Brothers Ho p (male patients only)	Chicago	80	45	150	280	8	Ex	#	16 mo	no	ye	yes	no	no	yes
American Ho p and Tr School for Nurses	Chicago	60	40	20	170	3	Ex	April	1 yr	no	yes	yes	yes	no	yes
Augustana Ho pital	Chicago	yes	yes	yes	300	9	Ap	Indef	2 yr	no	yes	ye	yes	no	ye
Chicago Policlinic and Hospital [1]	Chicago	25	15	10	50	6	Ex	May	18 mos	yes	yes	yes	no	no	yes
Columbus Hospital	Chicago	60	41	24	125	5	Ex	April	1 yr	no	ye	yes	yes	no	ye
Cook County Hospital	Chicago	600	600	1 200	2,400	80	1 y		18 mo	ye	yes	ye	no	no	ye
Englewood Hospital	Chicago	40	40	70	150	4	1 y		18 mos	no	yes	ye	yes	no	no
Henrotin Memorial Hospital [1]	Chicago	yes	yes	yes	60	3	Ap	July	6 mos	no	yes	no	no	no	yes
Hospital of St Anthony de Padua	Chicago	yes	yes	yes	174	4	Ap	††	18 mo	no	ye	ye	yes	no	ye
Illinois Central Hospital	Chicago	yes	yes	yes	110	4	1 y			ye	ye	yes	yes	$ 0	no
Mary Thompson Hospital of Chicago for Women and Children	Chicago	35	15	20	70	3	Ex	Ind f	1 yr	yes	ye	ye	yes	no	yes
Mercy Hospital	Chicago	170	105	50	325	10	Ex		1 yr	no	ye	no	ye	no	yes

1 Women interns admitted
4 No maternity work
* May and November
† Every two months
* One every two months
§ May and August
# April and October
# Every four months
May and November
†† Every three months
(a) Per year
(b) Plus fees

Name of Hospital	Location	Number of Beds				Interns		Examined or Apply In	Length of Service	Out-Patient Service	Accident Cases	Necropsies	Med Library	Salary per Mo	Training School for Nurses
		Surgical	Medical	Other	Total	Number in Hospital	By Appt or Exam								
Michael Reese Hospital	Chicago	77	36	362	475	23	Ex	May	1 yr	no	yes	yes	yes	no	yes
Norwegian American Hospital	Chicago	78	32	40	150	3	Ex	Indef	1 yr	no	yes	yes	no	no	yes
Norwegian Lutheran Deaconess Hospital	Chicago	58	20	22	100	3	Ap	Indef	1 yr	no	yes	yes	yes	no	yes
Park Avenue Hospital	Chicago	25	20	25	70	1	Ap	Nov	18 mos	no	yes	no	no	senior	yes
Post Graduate Hospital [1]	Chicago	yes	yes	yes	80	2	Ap	Indef	1 yr	yes	yes	yes	no	no	yes
Presbyterian Hospital [3]	Chicago	200	218	18	436	22	Ap	††	1 2 yrs	yes	yes	yes	yes	no	yes
Ravenswood Hospital	Chicago	20	15	10	50	2	Ap	Indef	1 yr	no	yes	yes	yes	no	yes
St Anne's Hospital	Chicago	53	25	22	100	3	Ap	Indef	4 mos	yes	yes	yes	no	no	yes
St Elizabeth's Hospital	Chicago	110	110	10	230	7	Ex	Indef	18 mos	no	yes	yes	no	no	yes
St Joseph's Hospital	Chicago	100	41	25	166	6	Ex	Indef	1 yr	yes	few	yes	yes	no	yes
St Luke's Hospital	Chicago	237	90	31	358	19	Ex	May	2 yrs	no	yes	yes	no	no	yes
St Mary of Nazareth Hospital	Chicago	150	46	24	220	4	Ex	Indef	18 mos	yes	yes	yes	yes	no	yes
University Hospital	Chicago	yes	yes	yes	100	4	Ex	May	1 yr	yes	no	yes	no	no	yes
Washington Boulevard Hospital	Chicago	yes	yes	yes	50	5	Ap	Indef	1 yr	yes	yes	yes	no	no	yes
Washington Park Hospital	Chicago	yes	yes	yes	110	6	Ap	Indef	16 mos	no	yes	yes	yes	no	yes
Wesley Memorial Hospital	Chicago	130	90	55	275	17	Ap	Indef	2 yrs	ye	yes	yes	yes	no	yes
Evanston Hospital	Evanston	yes	yes	yes	120	4	Ap		18 mos	yes	yes	yes	no	no	yes
Oak Park Hospital	Oak Park	50	20	30	100	3	Ap	*	1 yr	no	yes	yes	yes	$10	yes
West Suburban Hospital	Oak Park	yes	yes	50	150	4	Ap	May	1 yr	no	yes	yes	yes	no	yes
St John's Hospital	Springfield	100	145	20	265	6	Ap	†	1 yr	yes	yes	yes	yes	no	yes
INDIANA															
St Joseph's Hospital	Ft Wayne	110	35	20	165	2	Ap		1 yr	no	yes	yes	yes	yes	yes
Gary Hospital	Gary	yes	yes	yes	120	4	Ap		1 yr	yes	yes	yes	yes	yes	no
Indianapolis City Hospital	Indianapolis	150	250	140	540	18	Ap	‡	1 yr	yes	yes	yes	yes	$12 50	yes
Methodist Episcopal Hospital	Indianapolis	132	40	98	270	6	Ap	May	2 yrs	no	yes	yes	no	yes	yes
Robert W Long Hospital	Indianapolis	yes	yes	yes	100	4	Ap	April	1 yr	yes	yes	yes	yes	$12 50	yes
St Vincent's Hospital	Indianapolis	100	30	20	150	4	Ap	April	1 yr	no	yes	yes	no	$50	yes
St Anthony's Hospital	Terre Haute	100	100	60	260	2	Ap	Jan	1 yr	no	yes	no		yes	no
IOWA															
Mercy Hospital	Davenport	yes	yes	yes	12	1	Ap	May	1 yr	no	yes	yes	yes	no	yes
Iowa Methodist Hospital	Des Moines	yes	yes	yes	250	4	Ap	April	1 yr	yes	yes	yes	no	$25	yes
Mercy Hospital	Des Moines	yes	yes	yes	250	4	Ap	May	1 yr	no	yes	no	no	no	yes
State University Hospital	Iowa City	132	80	178	390	12	Ap	May	1 yr	yes	yes	yes	no	$125 (a)	yes
St Joseph's Mercy Hospital	Sioux City	yes	yes	yes	200	3	Ap	March	1 yr	yes	yes	yes	no	$25	yes
KANSAS															
St Margarets Hospital	Kansas City	40	25	350	400	7	Ap	April	1 yr	no	yes	yes	yes	$10	no
Bell Memorial Hospital [2]	Rosedale	25	35	15	75	3	Ap	April	1 yr	yes	yes	yes	yes	$25 (b)	yes
Christ's Hospital	Topeka	50	10	31	100	1	Ap	May	2 yrs	no	few	few	no	$50	yes
St Francis Hospital	Wichita	130	150	50	330	3	Ap	June	1 yr	yes	yes	yes	yes	$100	yes
Wichita Hosp and Tr School for Nurses	Wichita	yes	yes	yes	140	3	Ap	Indef	Indef	no	yes	yes	no	yes	yes
KENTUCKY															
St Elizabeth's Hospital	Covington	66	131	183	380	2	Ap	May	1 yr	no	yes	yes	no	$25	yes
Good Samaritan Hospital	Lexington	yes	yes	yes	150	1	Ap	April	1 yr	no	yes	no	no	no	yes
John N Norton Memoral Infirmary	Louisville	50	36	14	100	1	Ap	April	1 yr	no	no	yes	no	$50	yes
Louisville City Hospital	Louisville	175	175	50	400	10	Ap	May	1 yr	yes	yes	yes	yes	$	yes
St Anthony's Hospital	Louisville	80	50		130	2	Ap	May	1 yr	yes	yes	yes	yes	no	no
St Joseph's Infirmary	Louisville	100			100	1	Ap	May	1 yr	no	no	no	no	$25	no
LOUISIANA															
Charity Hospital of Louisiana	New Orleans	360	340	514	1 219	25	Ap	March	1 yr	yes	yes	yes	no	no	yes
Illinois Central Railroad Hospital	New Orleans	yes	yes	yes	100	2	Ap	May	1 yr	yes	yes	no	yes	$50	no
Touro Infirmary	New Orleans	yes	yes	yes	240	10	Ap	April	1 yr	yes	yes	yes	yes	$300 (a)	yes
Shreveport State Charity Hospital	Shreveport	150	150	15	315	6	Ap	April	1 yr	yes	yes	yes	yes	no	yes
T E Schumpert Memorial Sanitarium	Shreveport	yes	yes		250	2	Ap	April	1 yr	yes	yes	few	no	no	yes
MAINE															
Eastern Maine General Hospital	Bangor	60	40	20	120	2	Ap	Indef	1 yr	no	yes	no	yes	yes	yes
Central Maine General Hospital	Lewiston	yes	yes	yes	110	1	Ap	May	1 yr	no	yes	no	no	no	yes
Maine Eye and Ear Infirmary	Portland	yes	yes	yes	100	2	Ap	May	1 yr	yes	yes	yes	yes	no	yes
Maine General Hospital	Portland	84	23	46	153	4	Ap	June	1 yr	no	yes	yes	yes	no	yes
MARYLAND															
Church Home and Infirmary	Baltimore	yes	yes	yes	175	6	Ap	*	1 yr	no	yes	yes	no	no	yes
City Hospital at Bay View	Baltimore	yes	yes	yes	1 800	8	Ex	May	1 yr	no	yes	yes	no	$100 (a)	no
Franklin Square Hospital	Baltimore	yes	yes	yes	100	4	Ap	March	1 yr	yes	yes	yes	no	fees	yes
Hebrew Hospital and Asylum	Baltimore	8	81	14	180	11	Ap	May	1 yr	yes	yes	yes	no	$5	yes
Johns Hopkins Hospital	Baltimore	85	91	434	600	52	Ap	June	1 yr	yes	yes	yes	yes	no	yes
Maryland General Hospital	Baltimore	40	40	120	200	12	Ap	April	1 yr	yes	yes	yes	no	no	yes
Mercy Hospital	Baltimore	yes	yes	yes	200	12	Ex	April	1 yr	yes	yes	yes	no	$50	yes
South Baltimore General Hospital	Baltimore	30	25	[illegible]	60	3	Ap	April	1 yr	yes	yes	yes	no	$150 (a)	no
St Agnes Hospital	Baltimore	100	100	25	225	7	Ap	April	Indef	yes	yes	yes	no	no	yes
St Joseph's Hospital	Baltimore	190	71	14	275	8	Ex	April	1 yr	yes	yes	yes	no	no	yes
Union Protestant Infirmary	Baltimore	yes	yes	yes	112	8	Ap	Indef	1 yr	yes	no	yes	no	no	yes
United States Marine Hospital	Baltimore	60	60	5	125	1	Ex	April	1 yr	no	no	yes	yes	$75	no
University of Maryland Hospital	Baltimore	150	72	53	275	14	Ap	May	1 yr	yes	yes	yes	yes	$5	yes
MASSACHUSETTS															
Boston City Hospital	Boston	308	283	609	1,200	59	Ex	¶	1 yr	yes	yes	yes	yes	no	yes
Boston Floating Hospital	Boston	yes	yes	yes	110	8	Ex	April	2½ mos	yes	no	yes	yes	no	yes
Carney Hospital	Boston	70	81	69	220	13	Ex	Indef	16 mos	yes	yes	yes	yes	no	yes
Massachusets General Hospital	Boston	295	81		330	34	Ap	#	1 yr	yes	yes	no	yes	no	yes
Massachusetts Homeopathic Hospital	Boston	279	197	84	560	10	Ex	April	1 yr	yes	yes	yes	yes	no	yes
New England Hosp for Women and Child	Boston	42	37	101	180	4	Ap	June	1 yr	yes	no	yes	no	no	yes
Peter Bent Brigham Hospital	Boston	yes	yes		226	18	Ex		1 yr	yes	yes	yes	yes	no	yes
St Elizabeth's Hospital	Boston	40	60	50	200	6	Ex	June	1 yr	yes	yes	yes	yes	no	yes
Brockton Hospital	Brockton	22	22	71	115	2	Ap	May	1 yr	yes	yes	yes	small	$5	yes
Cambridge Hospital	Cambridge	yes	yes		50	3	Ap		1 yr	yes	yes	yes	no	no	yes
Rufus I Frost General Hospital	Chelsea	33	14	13	60	1	Ex	May	1 yr	yes	yes	no	small	$300 (a)	yes
Fall River City Hospital	Fall River	33	38	54	125	1	Ex	Dec	1 yr	yes	yes	yes	no	$900 (a)	yes
Union Hospital	Fall River	83	40	17	140	3	Ap	**	18 mos	yes	yes	yes	yes	yes	yes
Burbank Hospital	Fitchburg	50	50	13	113	2	Ap	April	1 yr	yes	yes	yes	no	no	yes
Lawrence General Hospital	Lawrence	40	15	75	130	6	Ap	**	1 yr	yes	yes	yes	no	$10	yes
Lowell Corporation Hospital	Lowell	yes	yes	yes	100	1	Ap	April	1 yr	yes	yes	yes	small	$25	yes
Lowell General Hospital	Lowell	yes	yes	yes	150	1	Ap	April	1 yr	no	yes	yes	no	$200 (a)	yes
St John's Hospital	Lowell	36	29		65	2	Ap	April	1 yr	yes	yes	yes	no	no	yes
Lynn Hospital	Lynn	75	40	36	156	3	Ex	May	1 yr	yes	yes	yes	yes	no	yes
St Luke's Hospital	New Bedford	yes	yes	yes	250	2	Ap	June	1 yr	no	few	no	small	no	yes
Newton Hospital	Newton	24	23	118	165	2	Ex	May	1 yr	yes	yes	yes	yes	no	yes
House of Mercy Hospital	Pittsfield	yes	yes	yes	175	1	Ap	April	1 yr	yes	yes	no	no	$50	yes
Salem Hospital	Salem	44	34	22	100	2	Ap	Indef	1 yr	yes	yes	yes	yes	no	yes

1 Women interns admitted
2 Women interns only
3 Internships open only to graduates of local medical school
* April and July
† May and August
‡ Two interns each month
§ Juniors 10 seniors 15 a month $100 on completion of year's service
# Every two months
¶ Surgical every 2 months medical every 3 months
** 1 very six months
†† May and November
(a) Per year (b) Last four months

Name of Hospital	Location	Number of Beds: Surgical	Medical	Other	Total	Interns: Number in Hospital	By Asst or Assn	Examined or Apply In	Length of Service	Out-Patient Service	Accident Cases	Necropsies	Med Library	Salary per Mo	Training School for Nurses
Mercy Hospital	Springfield	93	37	45	175	3	Ex	April	1 yr	no	yes	yes	no	no	yes
Springfield Hospital	Springfield	yes	yes	yes	160	4	Ap	††	1 yr	no	yes	yes	yes	no	yes
Waltham Hospital	Waltham	yes	yes	yes	110	2	Ap	May	1 yr	yes	yes	no	no	no	yes
Memorial Hospital [2]	Worcester	44	44	87	175	6	Ap	April	1 yr	yes	yes	yes	yes	no	yes
St Vincent's Hospital	Worcester	100	30	20	150	1	Ap			yes	no	no	no	$30 (a)	yes
Worcester City Hospital	Worcester	152	147	51	350	10	Ap	#	1 yr	yes	yes	yes	yes	no	yes
MICHIGAN															
University Homeopathic Hospital [1]	Ann Arbor	yes	yes	yes	110	4	Ex	June	1 yr	yes	yes	yes		$ 60 (a)	yes
University Hospital	Ann Arbor	248	209	47	504	11	Ex	Dec	1 yr	yes	yes	yes	yes	no	yes
City of Detroit Receiving Hospital	Detroit	yes	yes	yes	150	5	Ap	May	1 yr	yes	yes	yes	no	[illegible]	no
Grace Hospital	Detroit	yes	yes	yes	320	14	Ex	Indef	1 yr	yes	yes	yes	yes	seniors	yes
Harper Hospital	*Detroit*	280	50	170	500	29	Ap	Indef	1 yr	yes	yes	yes	yes	no	yes
Henry Ford Hospital [5]	Detroit	yes	yes		75	4	Ap	Indef	Indef	yes	yes	yes	no	yes	no
Providence Hospital	Detroit	yes	yes	yes	310	11	Ap	May	1 yr	no	yes	yes	mall	[illegible]	[illegible]
St Mary's Hospital	Detroit	150	129	21	300	12	Ap	May	1 yr	yes	yes	yes	yes	no	yes
Blodgett Memorial Hospital	Grand Rapids	yes	yes	yes	140	2		Indef	Indef	yes	yes	yes	no	no	yes
Hackley Hospital	Muskegon	30	28	22	80	1	Ap	Indef	Indef	no	yes	yes	yes	$40	yes
Copper Range Hospital	Trimountain	yes	yes		25	1	Ap	May	1 yr	yes	yes	yes	no	$25	yes
MINNESOTA															
Northern Pacific Railroad Hospital	Brainerd	yes	yes		85	2	Ap	May	1 yr	yes	yes	few	yes	$25	yes
St Mary's Hospital	Duluth	yes	yes	yes	200	4	Ap	April	1 yr	yes	yes	yes	yes	yes	yes
Abbott Hospital	Minneapolis	yes	yes	yes	50	1	Ap	March	1 yr	no	yes	yes	yes	no	yes
Minneapolis City Hospital	Minneapolis	132	140	628	900	23	Ap	Indef	1 yr	yes	yes	yes	no	yes	yes
Northwestern Hospital [2]	Minneapolis	50	30	20	100	2	Ap	April	1 yr	no	yes	yes	no	no	yes
Swedish Hospital	Minneapolis	yes	yes	10	210	4	Ap	April	1 yr	yes	yes	yes	no	$25	yes
University Hospital	Minneapolis	53	51	96	210	13	Ap	April	1 yr	yes	no	yes	yes	no	yes
St Mary's Hospital	Rochester	yes	yes	yes	300	12	Ap	Indef	1 yr	no	yes	no	yes	no	yes
Bethesda Hospital	St Paul	10	30	20	100	1	Ap	April	1 yr	no	yes	no	no	$25	yes
City and County Hospital	St Paul	yes	yes	yes	800	20	Ap	April	1 yr	yes	yes	yes	yes	no	yes
Mounds Park Sanitarium	St Paul	42	75	8	125	1	Ap	Indef	1 yr	no	yes	few	mall	$30	yes
St Joseph's Hospital	St Paul	80	50	20	150	4	Ap	April	1 yr	no	yes	yes	no	no	yes
St Luke's Hospital	St Paul	yes	yes	10	135	2	Ap	April	1 yr	no	yes	yes	no	$25	yes
MISSISSIPPI															
Mississippi State Charity Hospital	Jackson	100			100	3	Ap	April	1 yr	yes	yes	yes	small	no	yes
Natchez Hospital	Natchez	60	60	8	128	3	Ap	April	1 yr	yes	yes	yes	yes	no	yes
Mississippi State Charity Hospital	Vicksburg	yes	yes	yes	250	3	Ap	Indef	1 yr	yes	yes	no	no	no	yes
MISSOURI															
Christian Church Hospital	Kansas City	yes	yes	yes	140	3	Ap	April	1 yr	no	yes	no	no	$30	yes
Kansas City General Hosp (white and col)	Kansas City	yes	yes	yes	500	16	Ap	May	1 yr	no	yes	yes	no	no	yes
Research Hospital	Kansas City	yes	yes	12	140	3	Ap	April	1 yr	no	yes	yes	yes	$40	yes
St Joseph's Hospital	Kansas City	130	66	16	212	3	Ap	*	18 mos	yes	yes	yes	yes	no	yes
St Luke's Hospital	Kansas City	yes	yes	yes	50	2	Ap	April	1 yr				no	no	yes
St Mary's Hospital	Kansas City	100	75		175	2	Ap		1 yr	no	yes	no	no	$30	yes
Swedish Hospital	*Kansas City*	yes	yes	yes	50	2	Ap	*Indef*	1 yr	no	yes	no	yes	no	yes
University Hospital	Kansas City	yes	yes	yes	75	1	Ap	Indef	Indef	yes	yes	yes	yes	$125	yes
Alexian Brothers Hospital	St Louis	80	120		200		Ap	May	1 yr	yes	yes	yes	no	no	yes
Barnes Hospital	St Louis	68	70	112	250	15	Ex	May	1 yr	yes	yes	yes	yes	no	yes
Jewish Hospital	St Louis	40	40	70	100	2	Ex	April	1 2 yrs	yes	yes	yes	no	†	yes
Missouri Baptist Sanitarium	St Louis	120	75	205	400	4	Ap	April	1 yr	no	yes	few	no	yes	yes
St John's Hospital	St Louis	135	59		194	4	Ap	March	3 mos	no	yes	yes	yes	$20	yes
St Louis City Hospital	*St Louis*	500	420	800	1,720	48	Ex	May	1 yr	no	yes	yes	yes	$25	yes
St Mary's Infirmary	St Louis	125	50		175	3	Ap	†	1 yr	no	yes	yes	no	$25	yes
MONTANA															
St Ann's Hospital	Anaconda	yes	yes	yes	100	1	Ap			no	yes	no	no		no
Murray Hospital [1]	Butte	64	32	4	100	2	Ap	May	1 yr	yes	yes	yes	yes	$40	yes
St James Hospital	Butte	75	50	25	150	2	Ap	May	1 yr	yes	yes	yes	no	$40	yes
Northern Pacific Hospital	Glendive	yes	yes	yes	60	1	Ap	May	1 yr	yes	yes	yes	yes	$40	no
Northern Pacific Benefit Assn Hospital	Missoula	yes	yes	yes	75	2	Ap	May	1 yr	yes	yes	yes	no	$25	no
NEBRASKA															
St Elizabeth's Hospital	Lincoln	yes	yes	yes	175	2	Ap	Indef	1 yr	no	yes	no	yes	$25	yes
Bishop Clarkson Memorial Hospital	Omaha	34	34	12	80	2	Ap	Nov	1 yr	no	no	yes	no	yes	yes
Creighton Memorial St Joseph's Hospital	*Omaha*	222	124	54	400	6	Ex	April	1 yr	yes	yes	yes	yes	$100 (a)	yes
Nebraska Methodist Hospital [1]	Omaha	yes	yes	yes	210	4	Ap	Indef	Indef	no		yes	no	no	yes
University Hospital	Omaha	50	50	20	120	7	Ap	April	1 yr	yes	yes	yes	yes	$	yes
NEW HAMPSHIRE															
Mary Hitchcock Memorial Hospital	Hanover	50	10	10	70	2	Ap	Indef	1 yr	yes	few	few	no	no	yes
NEW JERSEY															
Atlantic City Hospital	Atlantic City	yes	yes	yes	190	3	Ap	May	1 yr	yes	yes	yes	no	yes	yes
Bayonne Hospital and Dispensary	*Bayonne*	39	37	33	109	3	Ap	June	1 yr	yes	yes	yes	no	$25	yes
Cooper Hospital	Camden	60	40	50	150	5	Ap	April	1 yr	yes	yes	yes	yes	$40	yes
West Jersey Homeopathic Hospital	Camden	65	60	50	175	2	Ap	April	1 yr	yes	yes	yes	yes	$40	yes
Alexian Brothers Hospital	Elizabeth	55	60		115	3	Ap	Nov	1 yr	yes	yes	yes	no	$40	no
Elizabeth General Hospital	Elizabeth	41	38	86	165	4	Ap	April	1 yr	yes	yes	yes	small	$100	yes
St Elizabeth's Hospital	Elizabeth	60	66	29	160	2	Ex	April	1 yr	yes	yes	no	no	$140 (a)	yes
Englewood Hospital Association	Englewood	yes	yes	yes	115	2	Ex	Dec	1 yr	yes	yes	yes	no	$140	yes
Hackensack Hospital	*Hackensack*	yes	yes	yes	190	3	Ex	June	1 yr	yes	yes	yes	no	no	yes
St Mary's Hospital	Hoboken	yes	yes	yes	400	3	Ap	June	15 mo	yes	yes	no	no	no	no
Christ Hospital	Jersey City	yes	yes	yes	120	4	Ap	Indef	16 mo	yes	yes	no	no	yes	yes
Jersey City Hospital	Jersey City	yes	yes	yes	600	8	Ap	Feb	2 yr	yes	yes	yes	no	$ 400	yes
St Francis Hospital	Jersey City	116	107		223	5	Ap	April	1 yr	yes	yes	yes	yes	no	no
Monmouth Memorial Hospital	Long Branch	60	49	59	170	2	Ap	April	1 yr	yes	yes	yes	no	$10	yes
Mountainside Hospital	Montclair	48	74	28	140	4	Ex	May	1 yr	yes	yes	yes	mall	yes	yes
Hospital of St Barnabas	Newark	yes	yes	yes	103	3	Ex	April	1 yr	yes	yes	yes	no	$15	yes
Newark Beth Israel Hospital	Newark	70	30	40	100	4	Ex	Indef	1 yr	yes	yes	yes	no	$150 (a)	yes
Newark City Hospital	Newark	yes	yes	yes	500	10	Ex	Jan	2 yrs	no	yes	yes	no	no	yes
Newark Memorial Hospital	Newark	68	40	37	125	2	Ap	May	1 yr	yes	yes	yes	no	$	yes
St James Hospital	Newark	yes	yes	yes	81	1	Ex	May	1 yr	yes	yes	yes	no	$75 (a)	yes
St Michael's Hospital	Newark	107	230		345	5	Ex	Feb	1 yr	yes	yes	yes	no	no	no
Orange Memorial Hospital	Orange	53	53	44	150	3	Ap	April	1 yr	yes	yes	yes	no	$25	yes
St Mary's Hospital	Orange	80	60	40	180	3	Ex	April	1 yr	yes	yes		yes	no	yes
Passaic General Hospital	Passaic	41	27	36	104	2	Ex	Nov	1 yr	yes	yes	yes	no	$50	yes
St Mary's Hospital	Passaic	yes	yes	yes	60	2	Ex	Indef	Indef	yes	yes	yes	yes	no	yes
Nathan and Miriam Barnert Hospital	Paterson	56	19	10	85	3	Ex	Indef	18 mo	yes	yes	yes	no	$25	yes
Paterson General Hospital	Paterson	46	30	40	116	4	Ap	May	1 yr	yes	yes	yes	yes	no	yes
St Joseph's Hospital	Paterson	yes	yes	yes	340	1	Ex	May	1 yr	yes	yes	yes	yes	no	yes
Muhlenberg Hospital	Plainfield	yes	yes	yes	110	2	Ap	May	1 yr	yes	yes	yes	no	$50 (a)	yes
Mercer Hospital	Trenton	71	43	61	175	2	Ap	May	1 yr	yes	yes	yes	yes	$40 (a)	yes
St Francis Hospital	Trenton	yes	yes	yes	140	4	Ap	June	1 yr	yes	yes	yes	no	no	yes

1 Women interns admitted
5 Conducted during period of the war as U S General Hospital No 36

April and December
† $25 for junior $30 for seniors
May and July
†† First of Jan April July and Oct

I very two months
* One int in med salary On or
(a) I

HOSPITALS FURNISHING ACCEPTABLE INTERNSHIPS—Continued

Name of Hospital	Location	Number of Beds				Interns		Examined or Apply in	Length of Service	Out-Patient Service	Accident Cases	Necropsies	Med Library	Salary per Mo	Training School for Nurses
		Surgical	Medical	Other	Total	Number in Hospital	By Appt or Exam								
William McKinley Memorial Hospital	Trenton	yes	yes	yes	75	2	Ap	May	1 yr	yes	yes	yes	no	$100 (a)	yes
North Hudson Hospital	Weehawken	yes	yes	yes	85	2	Ex		1 yr	yes	yes	yes	yes	$30	yes
NEW YORK															
Albany Hospital	Albany	yes	yes	yes	490	5	Ap	May	1 yr	yes	yes	yes	no	$100 (a)	yes
St Peter's Hospital	Albany	yes	yes	yes	110	4	Ex	May	1 yr	yes	yes	yes	no	$30	yes
Auburn City Hospital [1]	Auburn	20	22	58	100	1	Ap	May	1 yr	yes	yes	yes	no	no	yes
Binghamton City Hospital [1]	Binghamton	29	28	80	142	2	Ex	June	1 yr	no	yes	yes	yes	$100 (a)	yes
Brooklyn Hospital	Brooklyn	142	66	78	286	12	Ap	Indef	1 yr	no	yes	yes	yes	no	yes
Greenpoint Hospital	Brooklyn	75	75	60	210	10	Ap	*	1 yr	yes	yes	yes	yes	no	yes
The Jewish Hospital	Brooklyn	100	89	96	285	13	Ex	Indef	18 mos	yes	yes	yes	yes	no	yes
Kings County Hospital	Brooklyn	278	851	80	1 209	27	Ex	Indef	2 yrs	yes	yes	yes	yes	no	yes
Long Island College Hospital	Brooklyn	202	180	192	574	13	Ap	April	2 yrs	yes	yes	yes	yes	no	yes
Methodist Episcopal Hospital	Brooklyn	yes	yes	50	330	9	Ex	May	2 yrs	yes	yes	yes	no	no	yes
Norwegian Lutheran Deaconess Home and Hospital	Brooklyn	40	40	95	175	5	Ex	Indef	18 mos	yes	yes	yes	no	$150 (a)	yes
St Catherine's Hospital	Brooklyn	150	70	30	250	10	Ap	†	20 mos	no	yes	yes	small	no	yes
St John's Hospital	Brooklyn	yes	yes	yes	100	4	Ap	Indef	16 mos	no	yes	yes	no	no	yes
St Mary's Hospital [1]	Brooklyn	152	132	16	300	6	Ap	†	1 yr	no	no	yes	no	yes	yes
St Peter's Hospital	Brooklyn	yes	yes		274	4	Ap	†	1 yr	no	yes	yes	no	no	yes
Swedish Hospital	Brooklyn	yes	yes	yes	75	3	Ap	Indef	1 yr	no	yes	yes	no	no	yes
Wyckoff Heights Hospital	Brooklyn	145	20	10	175	3	Ap	Indef	1 yr	no	yes	yes	no	$30	no
Buffalo City Hospital	Buffalo	yes	yes	yes	280	20	Ex	Indef	1 yr	yes	yes	yes	no	no	yes
Buffalo Columbus Hospital	Buffalo	27	26		53	2	Ap	April	1 yr	yes	yes	yes	small	$25	yes
Buffalo General Hospital	Buffalo	90	90	195	375	12	Ex	April	1 yr	no	yes	yes	yes	no	yes
Buffalo Homeopathic Hospital [1]	Buffalo	60	44	56	160	3	Ap	May	1 yr	no	yes	yes	yes	no	yes
Buffalo Hospital of the Sisters of Charity	Buffalo	110	92		207	3	Ap	Indef	1 yr	no	yes	yes	no	no	yes
Emergency Hosp of the Sisters of Charity	Buffalo	44	41		85	3	Ap	Indef	1 yr	no	yes	yes	yes	$10	yes
Erie County Hospital	East View	60	200	120	380	4	Ap	†	1 yr	yes	yes	yes	no	yes	yes
Westchester County Hospital	Elmira	50	183		183	8	Ex	April	1 yr	yes	yes	yes	no	yes	yes
Arnot Ogden Memorial Hospital	Flushing	yes	yes	yes	110	1	Ap	†	18 mos	no	yes	yes	no	$30	yes
Flushing Hospital and Dispensary	Glens Falls	45	30	70	150	2	Ap	May	1 yr	yes	yes	yes	no	$200 (a)	yes
Glens Falls Hospital	Long Island City	yes	yes	yes	80	4	Ap	†	18 mos	no	yes	yes	no	yes	no
St John's Hospital	Mineola	100	106	19	225	1	Ap	May	1 yr	no	yes	yes	no	no	yes
Nassau Hospital	Mount Vernon	yes	yes	yes	70	6	Ap	Indef	18 mos	no	yes	yes	no	$30	yes
Mount Vernon Hospital [1]	New Rochelle	yes	yes	yes	103	2	Ap	Indef	1 yr	no	yes	yes	no	$100 (a)	yes
New Rochelle Hospital	New York	yes	yes	yes	82	2	Ex	May	2 yrs	no	yes	yes	no	no	yes
Bellevue Hospital [1]	New York	481	449	0	1 6.6	80	Ap	May	1 yr	yes	yes	yes	no	fees	yes
Beth Israel Hospital	New York	48	72	22	142	9	Ex	†	1½-2 yrs	no	yes	yes	no	fees	yes
Correctional Hospital	New York	yes	yes	yes	140	4	Ex		1 2 yrs	yes	yes	yes	no	$30	yes
Fordham Hospital	New York	115	83	78	276	13	Ap	Indef	1 yr	no	yes	yes	yes	no	yes
French Hospital	New York	yes	yes	yes	120	5	Ex	Dec	2 yrs	no	yes	yes	no	$600 (a)	no
Gouverneur Hospital	New York	80	80	25	185	12	Ex	*	16 mos	yes	yes	yes	yes	no	no
Hahnemann Hospital	New York	yes	yes	yes	138	4	Ap	Feb	1 2 yrs	yes	yes	yes	no	no	yes
Harlem Hospital	New York	yes	yes	yes	390	18	Ex	Indef	1 yr	yes	yes	yes	no	no	yes
Italian Hospital	New York	30	30		160	4	Ap	Indef	2 yrs	no	yes	yes	small	$10	yes
Knickerbocker Hospital	New York	yes	yes	yes	60	5	Ex	†	1 yr	yes	yes	yes	yes	no	no
Lebanon Hospital	New York	200	125		200	12	Ex	Indef	15 mos	yes	yes	yes	no	no	no
Lenox Hill Hospital	New York	116	113	201	325	15	Ap	Dec	2 yrs	yes	yes	yes	no	yes	yes
Lincoln Hospital and Home (colored)	New York	264	341	1 2.2	430	14	Ex	Indef	1 yr	yes	yes	yes	no	no	yes
Metropolitan Hospital [1]	New York	yes	yes	yes	1 897	15	Ap	†	21 mos	yes	yes	yes	yes	no	yes
Mt Sinai Hospital	New York	80	80	30	521	22	Ex	Feb	18 mos	no	yes	yes	yes	no	no
N Y Homeo Med Coll and Flower Hosp	New York	yes	yes	yes	200	9	Ap	Indef	18 mos	yes	yes	yes	yes	yes	yes
New York Post Graduate Hospital	New York	40	26		400	23	Ex	Indef	18 mos	yes	yes	yes	yes	yes	yes
Park Hospital	New York	94	86	63	66	2	Ap	Indef	2 yrs	yes	yes	yes	no	no	yes
Presbyterian Hospital	New York	yes	yes	yes	210	20	Ap	Indef	1 yr	no	yes	yes	yes	no	yes
Roosevelt Hospital	New York	yes	yes	yes	250	16	Ex	†	2 yrs	yes	yes	yes	no	no	yes
Society of the New York Hospital	New York	175	175		280	18	Ex	Indef	1 yr	yes	yes	yes	yes	yes	yes
St Francis Hospital	New York	25	25		50	8	Ap	Dec	2 yrs	yes	yes	yes	no	no	yes
St Lawrence Hospital	New York	yes	yes	yes	50	2	Ex	†	2 yrs	yes	yes	yes	no	no	yes
St Luke's Hospital	New York	yes	yes		382	18	Ex	Indef	1 yr	no	no	yes	no	no	yes
St Mark's Hospital	New York	138	70	10	80	4	Ex	†	2 yrs	no	yes	no	no	no	no
St Vincent's Hospital	New York	34	20	20	300	16	Ex	Indef	2 yrs	yes	yes	yes	yes	no	yes
Sydenham Hospital	Port Chester	40	30	8	74	3	Ex	†	2 yrs	yes	yes	yes	yes	no	yes
Volunteers Hospital	Poughkeepsie	18	18	18	78	6	Ex	Indef	2 yrs	yes	yes	yes	no	yes	yes
United Hospital	Rochester	36	36	27	54	2	Ex	May	2 yrs	yes	yes	yes	no	no	yes
Vassar Bros Hospital	Rochester	yes	yes	yes	99	2	Ex	Indef	2 yrs	yes	yes	yes	no	$20	yes
Hahnemann Hospital	Schenectady	124	85	76	140	4	Ap	Indef	1 yr	no	yes	no	no	$30	no
Rochester General Hospital	Syracuse	56	44	73	280	6	Ap	May	1 yr	yes	yes	no	no	$100	yes
Ellis Hospital	Syracuse.	yes	yes	yes	173	4	Ap	Indef	1 yr	no	yes	no	yes	$240 (a)	yes
Hospital of the Good Shepherd	Syracuse	yes	yes	yes	200	6	Ap	May	1 yr	yes	yes	yes	yes	$20	yes
St Joseph's Hospital	Tompkinsville	yes	yes	yes	120	6	Ex	§	1 yr	yes	yes	yes	yes	yes	yes
Syracuse Memorial Hospital	Troy	49	64	37	100	3	Ap	May	1 yr	no	yes	no	yes	no	yes
Staten Island Hospital	White Plains	42	48	80	100	6	Ap-	May	1 yr	no	yes	yes	yes	no	yes
Samaritan Hospital	Yonkers	8	9	27	175	4	Ex	‡	1 yr	no	yes	yes	yes	no	yes
White Plains Hospital Association	Yonkers	46	32	22	44	1	Ap	May	1 yr	no	yes	yes	no	no	yes
St John's Riverside Hospital		41	41		100	4	Ap	May	1 yr	no	yes	yes	yes	no	yes
St Joseph's Hospital					82	3	Ap	Indef	2 yrs	no	yes	no	no	no	yes
NORTH CAROLINA								Nov	18 mos	yes	yes	yes	yes	$30	yes
Highsmith Hospital	Fayetteville	55	20	4	79	2	Ap	May	1 yr	yes	yes	yes	yes	no	yes
Rex Hospital	Raleigh	yes	yes	yes	75	2	Ap		6-12 mos	no	yes	no	no	yes	yes
James Walker Memorial Hospital	Wilmington	64	64	47	175	2	Ap		1 yr.	yes	yes	yes	no	fees	yes
NORTH DAKOTA														$25	yes
Bismarck Evangelical Hospital [1]	Bismarck	yes	yes	yes	140	2	Ap	May	1 yr	no	yes	yes	no	yes	yes
St John's Hospital	Fargo	49	32	20	101	2	Ap	Indef	1 yr	no	yes	yes	yes	$300 (a)	yes
OHIO															
City Hospital	Akron	72	32	121	225	3	Ap	Indef	1 yr	yes	yes	yes	small	no	yes
Christ Hospital	Cincinnati	60	40	100	200	3	Ap	April	1 yr	no	yes	no	few	no	yes
Cincinnati General Hospital [1]	Cincinnati	128	130	592	850	29	Fx	Indef	18 mos	yes	yes	yes	yes	no	yes
Good Samaritan Hospital	Cincinnati	yes	yes	yes	255	3	Ap	Spring #	1 yr	no	yes	no	yes	$25	yes
Jewish Hospital	Cleveland	50	50	20	120	3	Ap	Indef	1 yr	no	yes	no	no	no	yes
Cleveland City Hospital	Cleveland	yes	yes	yes	895	17	Ex		1 yr	no	few	yes	no	$25	yes
Lakeside Hospital	Cleveland	50	60	170	280	12	Ap	Indef	1 yr	no	yes	yes	no	no	yes
Mt Sinai Hospital [1]	Cleveland	yes	yes	yes	155	13	Ap	May	1 yr	yes	yes	yes	no	$12 50	yes
St John's Hospital	Cleveland	yes	yes	yes	150	4	Ex	May	1 yr	yes	yes	yes	yes	no	yes
St Luke's Hospital	Columbus	105	33	52	190	8	Ap	April	1 yr	no	yes	yes	no	fees	
St Vincent's Charity Hospital	Columbus	yes	yes	yes	50	1	Ex	*	1 yr	yes	yes	yes	no	$600 (a)	yes
Children's Hospital		yes	yes	yes	260	2	Ap	April	1 yr	no	yes	yes	no	no	yes
Grant Hospital							Ap	April	1 yr	yes	yes	yes	no	$600 (a)	yes
										no	yes	yes	no	$30	yes

1 Women interns admitted
* May and November
† Every six weeks
‡ November and May
§ April and July
¶ Every two and a half months
# May and August
** Every three months
(a) Per year

Name of Hospital	Location	Number of Beds: Surgical	Medical	Other	Total	Interns: Number in Hospital	By Appt or Exam	Examined or Apply in	Length of Service	Out Patient Service	Accident Cases	Necropsies	Med Library	Salary per Mo	Training School for Nurses
Hawkes Hospital of Mt Carmel	Columbus	91	43	16	150	4	Ap	April	1 yr	no	yes	yes	yes	no	no
Protestant Hospital Association	Columbus	50	50	16	116	6	Ex	May	1 yr	no	yes	yes	yes	no	yes
St Francis Hospital	Columbus	80	80		160	3	Ap	May	1 yr	yes	yes	yes	yes	no	no
Miami Valley Hospital	Dayton	yes	yes	yes	260	6	Ap	May	1 yr	yes	ye	ye	yes	no	yes
Springfield City Hospital	Springfield	60	40	20	120	2	Ap	June	1 yr	ye	yes	ye	no	$0	yes
Youngstown Hospital	Youngstown	150	70	30	250	7	Ap	May	1 yr	yes	yes	ye	yes	$10	yes
OKLAHOMA															
St Anthony s Hospital	Oklahoma City	80	40	30	150	1	Ex	April	1 yr	no	few	few	yes	$20	yes
State University Hospital	Oklahoma City	yes	yes	yes	176	4	Ap	April	1 yr	no		no	yes	no	yes
OREGON															
Multnomah County Hosptial	Portland	30	60	10	100	3	Ap	Fall	1 yr	no	yes	no	no	[illegible]	yes
St Vincent s Hospital	Portland	225	113	62	400	9	Ap	April	1 yr	no	yes	no	no	no	ye
PENNSYLVANIA															
Allentown Hospital [1]	Allentown	96	60	44	200	4	Ap	April	1 yr	ye	yes	yes	yes	no	ye
Bryn Mawr Hospital	Bryn Mawr	35	40		75	4	Ap	May	1 yr	yes	ye	yes	yes	$40	yes
Chester Hospital	Chester	54	19	70	143	3	Ap	April	1 yr	yes	yes	yes	yes	yes	yes
G F Geisinger Memorial Hospital	Danville	40	40	10	90	1	Ap	April	1 yr	ye	ye	ye	no	no	yes
Easton Hospital	Easton	32	19	54	10	2	Ap	April	1 yr	yes	yes	yes	yes	yes	yes
St Vincent s Hospital [1]	Erie	100	68	32	200	4	Ap	May	1 yr	yes	yes	yes	ye	yes	yes
Harrisburg Hospital [1]	Harrisburg	69	40	26	135	4	Ap	May	1 yr	yes	yes	yes	no	$60 (a)	yes
Lancaster General Hospital	Lancaster	28	28	71	127	4	Ap	May	1 yr	yes	yes	ye	ye	yes	ye
McKeesport Hospital	Mckeesport	83	40	37	160	3	Ap	April	1 yr	no	yes	yes	no	yes	yes
Frankford Hospital	Philadelphia	50	30	10	90	3	Ap	April	1 yr	yes	yes	ye	yes	yes	yes
F Douglas Memorial Hospital (colored) [1]	Philadelphia	yes	yes	yes	75	4	Ap	April	1 yr	yes	yes	ye	no	no	ye
Germantown Dispensary and Hospital	Philadelphia	88	67	20	175	5	Ap	*	1 yr mos	yes	yes	yes	yes	no	ye
Hahnemann Hospital	Philadelphia	96	79	140	320	10	Ap	May	1 yr	yes	yes	yes	yes	no	yes
Hospital of Protestant Episcopal Church [1]	Philadelphia	200	200		500	12	Ex	Indef	2 yrs	yes	yes	yes		no	yes
Hospital of the University of Pennsylvania	Philadelphia	81	101	224	406	11	Ap	April	1 yr	yes	yes	yes	yes	yes	yes
Hospital of Woman s Medical College	Philadelphia	18	18	64	100	6	Ap	Indef	1 yr	ye	yes	yes	yes	no	yes
Jefferson Medical College Hospital [1 3]	Philadelphia	116	111	219	446	1	Ap	Indef	Indef	yes	yes	yes	yes	no	yes
Jewish Hospital of Philadelphia	Philadelphia	yes	yes	yes	154	9	Ex	April	1 yr	yes	yes	yes	yes	no	yes
The Lankenau Hospital	Philadelphia	143	93	9	245	9	Ex	†	2 mos	ye	ye	yes	yes	no	yes
Methodist Episcopal Hospital	Philadelphia	yes	yes	yes	170	7	Ex	May	1 yr	yes	yes	yes	no	no	yes
Misericordia Hospital	Philadelphia	100	100	25	225	6	Ap	May	1 yr	yes	yes	yes	no	no	yes
Mt Sinai Hospital	Philadelphia	yes	yes	yes	60	5	Ex	May	1 mos	yes	yes	yes	yes	no	yes
Pennsylvania Hospital	Philadelphia	170	145		315	14	Ap	Indef	2 yrs	no	yes	yes	yes	no	yes
Philadelphia General Hospital	Philadelphia	275	1 000	785	2,060	41	Ex	Indef	16 mos	no	no	yes	no	no	yes
Philadelphia Polyclinic	Philadelphia	yes	yes	yes	125	14	Ap	Jan	18 mos	yes	yes	yes	yes	no	yes
Presbyterian Hospital	Philadelphia	85	73	90	250	9	Ex	†	1 yr	yes	yes	yes	no	no	yes
Samaritan Hospital	Philadelphia	37	16	102	155	6	Ex	Indef	2 yrs	yes	yes	yes	no	no	yes
St Agnes Hospital	Philadelphia	70	81	121	272	7	Ap	May	1 yr	yes	yes	yes	ye	no	yes
St Joseph s Hospital	Philadelphia	57	28	96	181	8	Ex	May	1 yr	yes	yes	yes	no	no	yes
St Mary s Hospital	Philadelphia	185	134	31	350	8	Ap	May	1 yr	yes	yes	yes	yes	no	yes
St Timothy s Memorial Hospital	Philadelphia	38	34	78	150	3	Ap	May	1 yr	yes	yes	yes	no	no	yes
Stetson Hospital	Philadelphia	28	12	15	55	3	Ap	May	1 yr	yes	yes	few	yes	yes	yes
Woman s Homeopathic Association [1]	Philadelphia	71	70	19	160	4	Ap	May	1 yr	no	yes	yes	yes	$ 0	yes
Woman s Hospital of Philadelphia	Philadelphia	yes	yes	50	200	8	Ap	Indef	1 yr	yes	yes	yes	yes	no	yes
Allegheny General Hospital	Pittsburgh	216	220	34	470	5	Ap	May	1 yr	yes	yes	yes	yes	no	yes
Homeopathic Medical and Surgical Hosp	Pittsburgh	75	75	20	170	5	Ap	May	1 yr	yes	ye	yes	yes	no	yes
Mercy Hospital	Pittsburgh	220	125	50	395	15	Ex	May	1 yr	ye	yes	yes	yes	no	yes
Montefiore Hospital Association	Pittsburgh	yes	yes	yes	60	3	Ex	April	1 yr	yes	yes	yes	no	yes	yes
Passavant Hospital	Pittsburgh	35	35	70	140	3	Ap	May	2 yr	yes	yes	yes	yes	no	yes
Presbyterian Hospital	Pittsburgh	yes	yes	yes	175	5	Ap	April	1 yr	ye	ye	yes	no	no	yes
South Side Hospital	Pittsburgh	75	50	75	200	6	Ap	May	1 yr	yes	yes	yes	yes	no	yes
St Francis Hospital	Pittsburgh	yes	yes	yes	480	12	Ap	May	1 yr	yes	ye	ye	no	no	yes
St John s General Hospital	Pittsburgh	134	23	43	200	4	Ap	May	1 yr	ye	ye	yes	no	no	yes
St Joseph s Hospital and Dispensary	Pittsburgh	yes	yes	yes	118	3	Ap	May	1 yr	no	yes	ye	ye	$10 (i)	yes
St Margaret s Memorial Hospital	Pittsburgh	40	40	20	100	3	Ap	May	1 yr	no	yes	yes	no	yes	yes
Western Pennsylvania Hospital	Pittsburgh	295	195	10	500	21	Ex	May	1 yr	no	yes	yes	yes	no	ye
Robert Packer Hospital	Sayre	100	75	25	200	2	Ap	§	1 yr	ye	yes	yes	no	$20	yes
Scranton	Scranton	yes	yes	yes	118	3	Ap	April	1 yr	ye	yes	yes	yes	yes	yes
South Bethlehem	South Bethlehem	75	40	11	125	5	Ap	May	1 yr	ye	yes	yes	mill	$10	ye
Mercy Hospital	Wilkes-Barre	50	28	13	148	4	Ex	March	1 yr	yes	ye	yes	yes	no	yes
Wilkes Barre City Hospital	Wilkes Barre	yes	yes	yes	250	6	Ap	*	1 yr	ye	yes	no	yes	no	yes
Columbia Hospital [1]	Wilkinsburg	28	28	119	175	3	Ap	May	1 yr	no	ye	yes	no	yes	yes
PHILIPPINE ISLANDS															
Philippine General Hospital [1]	Manila	yes	yes	yes	600	30	Ex	Spring	1 mos	yes	yes	ye	no	no	ye
RHODE ISLAND															
State Infirmary	Howard	yes	yes	yes	100	2	Ap	Indef	1 yr	no	no	ye	yes	$ 0 (i)	no
Memorial Hospital	Pawtucket	yes	yes	yes	75	1	Ap	*	1 yr	ye	yes	yes	yes	$ 0 (i)	ye
Rhode Island Hospital	Providence	200	150	150	500	15	Ex	Indef	2 yrs	ye	ye	yes	yes	no	yes
Providence	Providence	52	50	89	190	5	Ex	Indef	16 mo	yes	yes	yes	ye	no	ye
Woonsocket Hospital	Woonsocket	yes	yes	yes	50	1	Ap	Indef	1 yr	yes	ye	yes	no	no	ye
SOUTH CAROLINA															
Roper Hospital	Charleston	128	108	12	248	6	Ap	May	1 yr	yes	yes	ye	yes	no	y
St Francis Xavier Infirmary [3]	Charleston	19	21	10	50	2	Ap	May	1 yr	no	yes	ye	no	no	yes
South Carolina Baptist Hospital [1]	Columbia	yes	yes	yes	150	1	Ap	May	1 yr	no	[illegible]	no	no	$10	yes
TENNESSEE															
Baroness Erlanger Hospital	Chattanooga	yes	yes	yes	150	3	Ap	April	1 yr	no	yes	yes	no	$15	yes
Knoxville General Hospital	Knoxville	yes	yes	yes	1	5	Ap	Indef	1 yr	yes	ye	yes	no	$ 0	ye
Baptist Memorial Hospital [1]	Memphis	150	150	90	390	15	Ap		1 yr	no	ye	yes	no		
Memphis City Hospital [1]	Memphis	170	50	6	230	8	Ex	March	1 yr	no	yes	ye	ye	no	y
St Joseph s Hospital	Memphis	yes	yes	yes	250	4	Ex	March	1 yr	no	ye	ye	yes	no	no
George W Hubbard Hospital	Nashville	yes	yes	yes	[illegible]	[illegible]	Ex	April	1 yr	ye	ye	yes	5	0	yes
Nashville City Hospital	Nashville	ye	yes	yes	160	6	Ex	Indef	1 yr 18 mo	yes	ye	yes	yes	$15	ye
Nashville Protestant Hospital	Nashville	50	20	14	84	4	Ap	April	1 yr	no	few	few	no	no	ye
St Thomas Hospital	Nashville	yes	yes	yes	200	4	Ap	May	1 yr	no	yes	few	no	no	y
Woman s Hosp of the State of Tennessee [6]	Nashville	yes	yes	yes	70	2	Ap	May	1 yr	no	ye	no	yes	$	y
TEXAS															
Hotel Dieu	Beaumont	140	40	20	210	1	Ap	April	1 yr	no	yes	ye	no	no	yes
St Paul s Sanitarium	Dallas	yes	yes	ye	200	4	Ap	May	1 yr	no	ye	[illegible]	no	[illegible]	y
Texas Baptist Memorial Sanitarium	Dallas	ye	yes	yes	250	4	Ex	May	1 yr	ye	ye	ye	no	$ 0	ye
John Sealy Hospital [3]	Galveston	yes	yes	yes	325	*	Ap	May	1 yr	ye	[illegible]	yes	yes	no	ye
St Mary s Infirmary	Galveston	yes	ye	yes	275	3	Ap	May	1 yr	no	yes	no	no	no	yes
Baptist Sanitarium and Hospital	Houston	yes	yes	10	140	1	Ap	April	1 yr	no	yes		ye	$10	yes
Southern Pacific Hospital	Houston	yes	yes	yes	10	-	Ap	May	1 yr		ye	ye	yes	$ 0	no
St Joseph s Infirmary	Houston	yes	yes	yes	150	4	Ap	Ma	[illegible]			no	no		yes

1 Women interns admitted
2 Women interns only
3 Internships open only to graduates of local medical school
6 Male patients accepted in private rooms only
* One every three month
† Every three month
April and June

Name of Hospital	Location	Number of Beds				Interns		Examined or Apply in	Length of Service	Out-Patient Service	Accident Cases	Necropsies	Med Library	Salary per Mo	Training School for Nurses
		Surgical	Medical	Other	Total	Number in Hospital	By Appt or Exam								
Robert B Green Memorial Hospital	San Antonio	yes	yes	yes	200	4	Ex	April	1 yr	yes	yes	yes	no	fees	yes
Santa Rosa Infirmary	San Antonio	yes	yes	yes	150	1	Ap	May	1 yr	yes	yes	no	no	no	yes
King's Daughters Hospital	Temple	yes	yes		60	1	Ap	Spring	1 yr	no	yes	yes	yes	fees	yes
Santa Fe Hospital	Temple	yes	yes	yes	125	2	Ap	April	1 yr	yes	yes	yes	no	$ 0	yes
Temple Sanitarium	Temple	125			125	3	Ap	May	1 yr	no	yes	yes	yes	$600	yes
Providence Sanitarium	Waco	100	32	68	200	3	Ap	May	1 yr	yes	yes	yes	no	no	yes
UTAH															
Thomas D Dee Memorial Hospital	Ogden	yes	yes	yes	70	2	Ap	May	1 yr	no	yes	few	yes	$40	yes
Dr Groves Latter Day Saints Hospital	Salt Lake City	yes	yes	16	200	3	Ap		1 yr	no	yes	yes	yes	yes	yes
Salt Lake County Infirmary	Salt Lake City	32	24	69	125	1	Ap		1 yr	no	yes	yes	no	yes	yes
St Mark's Hospital	Salt Lake City	80	60	25	150	3	Ap	May	1 yr	yes	yes	yes	yes	$10	yes
VERMONT															
Mary Fletcher Hospital	Burlington	yes	yes	yes	125	5	Ap	Indef	15 mos	yes	yes	yes	yes	yes	yes
Fanny Allen Hospital	Winooski	50	20		70	2	Ap	May	1 yr	no	yes	yes	no	no	yes
VIRGINIA															
George Ben Johnston Memorial Hospital	Abingdon	yes	yes	yes	37	1	Ap	May	1 yr	no	yes	yes	no	$25	yes
Hospital of St Vincent de Paul [5]	Norfolk	100	40	68	250	4	Ap	May	1 yr	yes	yes	yes	no	$25	yes
Norfolk Protestant Hospital	Norfolk	60	40	60	160	3	Ap	May	1 yr	yes	yes	yes	yes	$25	yes
Memorial Hospital [3]	Richmond	134	60	56	200	8	Ap	May	1 yr	no	yes	yes	no	$600 (a)	yes
Retreat for the Sick	Richmond	yes	yes	yes	60	2	Ap	April	1 yr	no	yes	yes	no	no	yes
Sheltering Arms Free Hospital	Richmond	20	10	15	50	2	Ap	April	1 yr	no	no	yes	no	no	yes
Virginia Hospital	Richmond	80	50	70	200	2	Ap	May	1 yr	yes	yes	yes	yes	fees	yes
Stuart Circle Hospital	Richmond	yes	yes	yes	65	2	Ap	May	1 yr	no	yes	yes	yes	$25	yes
Jefferson Hospital	Roanoke	yes	yes	yes	70	2	Ap	May	1 yr	no	few	yes	yes	$50	yes
University of Virginia Hospital	University	yes	yes	yes	200	11	Ap	July	1 yr	yes	yes	yes	yes	no	yes
WASHINGTON															
King County Hospital	Seattle	36	100	20	220	3	Ap	May	1 yr	no	yes	yes	yes	$30	no
Seattle City Hospital	Seattle	27	30	33	90	3	Ap	May	1 yr	yes	yes	yes	no	$50	yes
Seattle General Hospital	Seattle	75	50	25	150	1	Ap	Feb	2 yrs	no	few	no	no	yes	yes
Marie Beard Deaconess Hospital	Spokane	38	8	19	65	1	Ap		1 yr	no	no	no	no	$50	yes
St Elizabeth s Hospital	Yakima	75	75	15	165	1	Ap	April	1 yr		yes	yes	no	$50	yes
WEST VIRGINIA															
Charleston General Hospital	Charleston	yes	yes	yes	120	1	Ex	April	1 yr	no	yes	no	no	yes	yes
Sheltering Arms Hospital	Hansford	100	45	5	150	5	Ap	May	1 yr	no	yes	yes	yes	no	yes
Ohio Valley General Hospital	Wheeling	80	50	25	155	3	Ap	†	1 yr	yes	yes	yes	yes	no	yes
WISCONSIN															
St Joseph s Hospital	Ashland	75	75	25	175	1	Ap	May	1 yr	no	yes	no	no	no	yes
St Agnes Hospital	Fond du Lac	yes	yes	yes	130	2	Ap	Indef	1 yr	no	yes	yes	yes	$20	yes
La Crosse Lutheran Hospital	La Crosse	60	32	8	100	2	Ap	May	1 yr	yes	yes	yes	yes	$50	yes
St Francis Hospital	La Crosse	yes	yes	yes	210	2	Ap	Indef	1 yr	no	yes	yes	yes	$50	yes
St Mary s Hospital	Madison	50	15		65	2	Ap		1 yr	no	few	no	no	$50	no
St Joseph s Hospital	Marshfield	yes	yes	yes	135	1	Ap	Indef	1 yr	no	yes	yes	yes	yes	yes
Columbia Hospital	Milwaukee	35	20	37	92	5	Ap	Indef	1 yr	no	yes	yes	yes	$25	yes
Milwaukee Hospital	Milwaukee	80	30	52	162	3	Ap	May	1 yr	no	yes	yes	yes	$25	yes
Mt Sinai Hospital	Milwaukee	yes	yes	yes	100	2	Ap			yes		yes	no		yes
St Joseph s Hospital	Milwaukee	90	22	12	134	3	Ex	Indef	Indef	yes	no	no	no	no	yes
Milwaukee County Hospital	Wauwatosa	100	200		300	8	In	May	1 yr	no	few	yes	yes	yes	yes

SECTION II, STATE HOSPITALS AND HOSPITALS FOR THE INSANE, TOTAL, 25, INTERNSHIPS, 72, BEDS, 41,722

Searcy Hospital	Mt Vernon Ala				1 000	1	Ap	Spring	1 yr	no	no	yes	no	$25	yes
Bryce Hospital	Tuscaloosa Ala	20	50		1 550	2	Ap	April	1 yr	no	no	yes	no	$25	yes
Arkansas State Hosp for Nervous Diseases	Little Rock Ark				2 020	1	Ap	Indef	1 yr	no	no	yes	yes	$50	no
Saint Elizabeth s Hospital	Washington D C			3 429	3 429	17	Ex	Indef	Indef	no	yes	yes	yes	$900 (a)	yes
Cherokee State Hospital	Cherokee Ia	10			1 150	3	Ap	April		no	yes	yes	yes	$50	yes
Independence State Hospital	Independence Ia			1 200	1 200	0	Ap	Indef	Indef	no	no	yes	yes	yes	yes
East Louisiana Hospital for Insane (white and colored)	Jackson La				1 600	3	Ap	April	Indef	no	yes	yes	yes	$50	yes
Augusta State Hospital	Augusta Me			1 100	1 100	2	Ap	Indef	Indef	no	no	yes	yes	$800 (a)	yes
Psychopathic Dept Boston State Hospital	Boston Mass				110	7	Ap	Indef	Indef	yes	no	yes	yes	no	no
Danvers State Hospital (Hathorne P O)	Danvers Mass				1 485	3	Ap	April	1 yr	yes	yes	yes	yes	yes	yes
State Infirmary	Tewksbury Mass	yes	yes	yes	2 500	1	Ap		1 yr	no	no	yes	no	yes	yes
State Psychopathic Hospital	Ann Arbor Mich				62	1	Ap	May	1 yr	yes	no	yes	yes	$600 (a)	yes
Fergus Falls State Hospital	Fergus Falls Minn	yes	yes	yes	1 700	1	Ap	April	Indef	no	no	yes	no	$50	yes
New Hampshire State Hospital	Concord N H				1 300	1	Ap	Jan	8 mos	no	yes	yes	yes	$50	yes
Central Islip State Hospital [1]	Central Islip N Y				5 180	2	Ex	Indef	Indef	yes	yes	yes	yes	$1 000 (a)	yes
Gowanda State Homeopathic Hospital [1 2]	Collins N Y				1 316	1	Ex	Indef	§	no	yes	yes	yes	$1 200 (a)	yes
Kings Park State Hospital [1]	Kings Park N Y	yes	yes	yes	4 500	2	In	Indef	Indef	yes	no	no	yes	$1 000 (a)	yes
St Lawrence State Hospital [1]	Ogdensburg N Y		2 236		2 236	8	Ex	Indef	Indef	yes	yes	yes	yes	$1 000 (a)	yes
Hudson River State Hospital [1]	Poughkeepsie N Y			3 324	3 324	3	Ex	Indef	Indef	yes	yes	yes	yes	$1 000 (a)	yes
Bloomingdale Hospital	White Plains N Y			300	300	2	Ap	Indef	Indef	no	yes	yes	yes	$1 000 (a)	yes
State Hospital at Raleigh [1]	Raleigh N C			1 150	1 150	2	Ap	April	1 yr	yes	no	yes	no	yes	yes
North Dakota State Hosp for the Insane	Jamestown N D	6	180	1 089	1 275	1	Ap	April	4 mos	no	yes	yes	yes	yes	no
State Hospital for the Insane	Allentown Pa	4	106	1 090	1 200	2	Ap	April	3 mos	no	yes	yes	yes	no	yes
State Hospital for the Northern Anthracite Coal Region of Pennsylvania	Scranton Pa	83	67	45	185	5	Ex	May	1 yr	yes	yes	yes	yes	$100 (a)	yes
Central Hospital for the Insane	Nashville Tenn			800	800	1	Ap	Indef	Indef	no	yes	no	yes	no	yes

SECTION III, OTHER SPECIAL HOSPITALS, TOTAL, 99, INTERNSHIPS, 388, BEDS, 215,443

Tuberculosis Hospital	Washington D C		145		145	2	Ap	May	1 yr	no	no	yes	no	no	no
U S Soldiers Home Hospital	Washington D C				300	5	Ap	May	1 yr	yes	yes	yes	yes	$35	no
Chicago Lying In Hosp and Dispensary	Chicago Ill			110	110	2	Ap	Indef	6 mos	yes	yes	yes	no	fees	yes
Chicago Maternity Hospital [8]	Chicago Ill			22	22	1	Ap	**	6 mos	yes	no	few	yes	fees	yes
Children s Memorial Hospital	Chicago Ill				175	6	Ap	††	8 mos	yes	yes	yes	yes	no	yes
Durand Hospital of the Memorial Institute for Infectious Diseases	Chicago Ill			50	50	2	Ap			no	no	yes		no	yes
Home for Destitute Crippled Children [9]	Chicago Ill				110	2				yes					
Illinois Charitable Eye and Ear Infirmary	Chicago Ill	yes	yes	yes	200	7	Ex	Indef	1 yr	yes	yes	no	no	no	no
Halstead Hospital	Halstead Kan	73			73	2	Ap	Indef	Indef	yes	yes	yes	no	$700	yes
Pope Sanatorium	Louisville Ky		25		25	3	Ap	May	1 yr	yes	no	yes	yes	yes	no
Illinois Central Hospital	Paducah Ky	100			100	2	Ap	Indef	1 yr	yes	yes	no	no	$25	no

1 Women interns admitted
3 Internships open only to graduates of local medical chool
- Previous training required
(a) Per year
* May and September
† May and November
‡ Summer months
§ No limit
8 Women interns preferred
9 Affiliated with Rush Medical College
** May and October
†† April and November

Name of Hospital	Location	Number of Beds				Interns		Examined or Apply in	Length of Service	Out-Patient Service	Accident Cases	Necropsies	Med Library	Salary per Mo	Training School for Nurses
		Surgical	Medical	Other	Total	Number in Hospital	By Appt or Exam								
Eye Ear Nose and Throat Hospital	New Orleans La				30	3	Ap	Indef	1 yr	ye	yes	no	ye	$ 5 (d)	no
Maine Eye and Ear Infirmary (Gen & Spec)	Portland Me	yes	yes	yes	100	2	Ap	June	1 yr	yes	yes	yes	no	no	yes
Baltimore Eye Ear and Throat Charity Hospital [1]	Baltimore Md	yes	yes		40	2	Ap	Indef	1 yr	yes	yes	yes	no	no	no
Hospital for Women of Maryland	Baltimore Md	yes	yes	yes	125	7	Ap	July	1 yr	yes	no	few	no	fees	yes
J L Kernon Hosp for Crippled Children	Baltimore Md	75			75	2	Ap	Indef	Indef	ye	few	few	ye	fees	no
Nursery and Child's Hospital	Baltimore Md	50			70	1	Ap	April	1 yr	yes	no	few	no	no	yes
University of Maryland Lying In Hospital	Baltimore Md			33	33	2	Ap	May	1 yr	yes	no	no	yes	no	yes
Thomas Wilson Sanitarium	Mt Wilson Md		70	30	100	3	Ap	April	3 mos	no		yes	no	no	ye
Maryland Tuberculosis Sanatorium	State Sanatorium Md		440		440	5	Ap	May	1 yr	no	no	no	no	$40	yes
Sheppard and Enoch Pratt Hospital	Towson Md		150		150	4	Ap	Indef	Indef	no	no	few	yes	fees	yes
Boston Consumptives Hospital	Boston Mass		400		400	3	Ap		6 mos	yes	yes	yes	small	$1 000 (a)	no
Boston Lying In Hospital	Boston Mass			53	53	8	Ap		6 mos	yes	yes	yes		no	yes
Children's Hospital	Boston Mass	39	44	67	150	9	Ap	Indef	§	yes	yes	no	no	no	yes
Collis P Huntington Cancer Hospital [7]	Boston Mass			26	6	2	Ap	Indef	1 yr	yes	no	yes	no	no	no
Dispensary and Hospital for Children [1]	Boston Mass	6	24		30	3	Ap	Indef	6 mos	yes	no	yes	yes	no	yes
Infants Hospital	Boston Mass		50		50	2	Ex	Nov	3 mo	no	no	yes	yes	no	yes
Mass Charitable Eye and Ear Infirmary	Boston Mass	yes	yes		250	8	Ex		16 mos	yes	yes	yes	yes	no	yes
St Mary's Inf Asylum and Lying In Hosp	Boston Mass				240	2	Ap								yes
Free Hospital for Women [7]	Brookline Mass	63			63	1	Ap	Indef	6 mos	yes	no	few	small	no	§
Children's Free Hospital [10]	Detroit Mich	yes	yes		120	2	Ap	Indef	3 mos	few	yes	yes	no	no	ye
Woman's Hospital and Infant's Home [7]	Detroit Mich	30	15	50	100	3	Ap	Indef	6 mo	no	no	few	yes	yes	yes
Morgan Park Hospital	Duluth Minn	32			32	1	Ap	Indef	1 yr	yes	ye	yes	no	no	no
Nopeming Sanatorium	Nopeming Minn		200		200	3	Ap	Indef	Indef	yes	yes	yes	yes	yes	yes
State Sanitarium for Crippled Indigent and Deformed Children	St Paul Minn	yes	yes	yes	130	2	Ap	Indef	Indef	yes	no	yes	small	no	yes
Children's Mercy Hospital	Kansas City Mo				100										
Barnard Free Skin and Cancer Hospital	St Louis Mo	20	10	10	45	3	Ap	May	1 yr	yes	no	yes	no	yes	no
St Louis Children's Hospital	St Louis Mo	35	30	75	160	9	Ex	May	1 yr	yes	few	yes	yes	no	yes
Montefiore Home Country Sanitarium	Bedford Hills N Y	yes	yes	yes	218	9	Ap	Indef	Indef	no	no	no	yes	yes	no
Kingston Avenue (Cont) Hospital [1]	Brooklyn N Y		231		231	10	Ex	Indef	6 mos	no	no	yes	yes	0	no
Children's Hospital	Buffalo N Y	yes	yes	yes	119	3	Ap	May	1 yr	yes	yes	yes	yes	$40	yes
Babies Hospital [1]	New York City	8	64		72	4	Ap		18 mos	ye	ye	no	no	no	yes
Herman Knapp Memorial Eye Hospital	New York City			51	51	2	Ap	Indef	18 mos	ye	yes	yes	yes	no	no
Hospital for Deformities and Joint Diseases	New York City	69			69	2	Ex	Nov	1 yr	ye	yes	no	no	yes	no
Jewish Maternity Hospital [1]	New York City			50	50	6	Ap		6 mos	yes	no	yes	no	$ 0	yes
Lying In Hospital of the City of New York	New York City			150	150	38	Ap	Indef	6 mos	yes	no	no	yes	no	yes
Manhattan Maternity and Dispensary	New York City				8	5	Ap	Indef	3 mos	yes	no	no	no	yes	yes
Memorial Hospital	New York City			100	100	4	Ap	Indef	1 yr	no	yes	no	yes	yes	no
Montefiore Home and Hosp for Chr Dis	New York City	50	410		460	9	Ex		1 yr	no	no	yes	yes	yes	yes
Neurological Institute of New York [7]	New York City	yes	yes		96	4	Ap	Indef	Indef	yes	yes	yes	no	$400 (a)	yes
New York Eye and Ear Infirmary	New York City	175			175	10	Ex	Indef	16 mos	yes	ye	ye	no	no	yes
N Y Infirmary for Women and Children	New York City	yes	yes	yes	150	5	Ap	Indef	2 yrs	yes	yes	yes	yes	yes	yes
New York Nursery and Child's Hospital	New York City			283	283	10	Ap	Indef	6 mos	yes	no	yes	no	fees	yes
New York Ophthalmic Hospital	New York City	74			74	0	Ex		1 yr	yes	yes	no	yes	yes	no
New York Orthopedic Disp and Hospital	New York City	109			109	3	Ap		1 yr	yes	no	ye	yes	no	no
New York Skin and Cancer Hospital	New York City	58	42		100	4	Ex	*	1 yr	ye	yes	yes	yes	no	yes
N Y Soc Relief of Ruptured and Crippled	New York City	300			300	5	Ap	Indef	4 mos	yes	no	yes	yes	no	no
Riverside Hospital	New York City		585		585	8	Ap	Indef	6 mos	no	no	no	no	no	no
Riverside Hosp of the City of New York	New York City		344		344	1		Indef	6 mo	yes	yes	yes	no	$ 10 (a)	no
Seton Hospital	New York City		240		240	3	Ap	Indef	1 yr	no	no	yes	no	ye	no
Sloane Hospital for Women	New York City	47		226	273	7	Ap		4 mos	no	no	no	no		yes
St Mary's Free Hospital for Children [7]	New York City	86	42		128	4	Ap	Nov	6 mos	yes	yes	yes	yes	$20	yes
Willard Parker Hospital	New York City		960		960	20	Ex	Indef	6 mo	no	no	no	no	$240 (a)	no
Woman's Hospital	New York City	138		100	238	9	Ex	Indef	1 yr	yes	no	yes	yes	no	yes
United States Marine Hospital	Stapleton N Y	48	154		202	5	Ex	July	1 yr	yes	yes	yes	yes	$40	no
Marshall Sanitarium	Troy N Y		90		90	2	Ap	April	1 yr	no	no	yes	no	$ 0	no
Rutherford Hospital	Rutherfordton N C	70			70	0	Ap	Indef	Indef	yes	few	few	yes	no	yes
Cincinnati Tuberculosis Sanatorium	Cincinnati Ohio				420	2	Ex	April	1 yr	no	no	yes	small	no	no
American Oncologic Hospital	Philadelphia Pa				0										
Children's Homeopathic Hospital	Philadelphia Pa	88	88	24	200	3	Ex	May	1 yr	yes	ye	yes	no	no	yes
Children's Hospital of Philadelphia	Philadelphia Pa	16	56		72	5	Ap	Indef	6-12 mos	yes	yes	yes	no	no	yes
Jewish Maternity Hospital	Philadelphia Pa			40	40	1	Ap		3 mos	no	no	no	no	no	no
Pennsylvania Hospital Department for Mental and Nervous Diseases	Philadelphia Pa			340	340	6	Ap	Indef	Indef	yes	no	yes	yes	no	yes
Philadelphia Hosp for Contagious Diseases	Philadelphia Pa		700		700	6	Ap	Indef	Indef	no	no	few	no	no	yes
Philadelphia Lying In Charity Hospital	Philadelphia Pa			81	81	2	Ap	Indef	3 mos	yes	no	no	no	no	yes
Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases	Philadelphia Pa	14	37	8	139	3	Ap	*	1 yr	yes	no	yes	yes	no	yes
St Vincent's Home and Maternity Hospital	Philadelphia Pa				450										
St Christopher's Hospital for Children	Philadelphia Pa	16	16	24	56	3	Ap		1 yr	yes	ye	few	no		yes
Wills Hospital	Philadelphia Pa	yes	yes	yes	11	2	Ex	Indef	18 mos	ye	yes	no	yes	no	no
West Philadelphia Hospital for Women	Philadelphia Pa	yes	yes	yes	70	2	Ap	Indef	Indef	no	yes	yes	no	yes	yes
Woman's Southern Homes Hospital	Philadelphia Pa	15	13	24	52	3	Ap	Indef	1 yr	yes	yes	yes	yes	yes	yes
Children's Hospital [7]	Pittsburgh Pa	yes	yes	yes	yes	2	Ap	Indef	1 yr			yes		$40	yes
Eye and Ear Hospital [1]	Pittsburgh Pa	43			43	1	Ap		2 yrs	yes	yes	ye	no	yes	no
Rosella Foundling and Maternity Hospital	Pittsburgh Pa				21	2	Ap			no	no	yes	no	no	yes
Tuberculosis League Hospital	Pittsburgh Pa	yes	yes		110	2	Ap	April	1 yr	yes	no	few	yes	one	yes
Butler Hospital	Providence, R I		200		200	1	Ap	Indef	Indef	no	yes	yes	ye	$1 000 (a)	yes
City Hospital (contagious and tuberculosis)	Providence R I	200			200	3	Ap	Indef	3-4 mo	yes	no	no	no	yes	no
Providence Lying In Hospital	Providence R I			100	100	2	Ap	Indef	4 mos	yes	no	yes	no	no	yes
Newell and Newell Sanitarium	Chattanooga Tenn	40	10	6	56		Ap	May	1 yr	yes	yes	ye	yes	yes	yes
Chesapeake and Ohio Hospital	Clifton Forge Va	75		10	85	1	Ap	Indef	1 yr	no	yes	no	no	$ 0	yes
Elizabeth Buxton Hospital	Newport News Va	30	0	10	40	1				no	yes	no			yes
Sarah Leigh Hospital	Norfolk Va			70	70	2	Ap	May	1 yr	yes	yes	ye	yes	$	yes
Grace Hospital	Richmond Va	40			40	2	Ap	April	1 yr	no	yes	no	yes		yes
Johnston Willis Sanitarium	Richmond Va	60			60	3	Ap	April	1 yr	no	yes	ye	yes	$ 0	yes
St Luke's Hospital	Richmond Va	80			80					no	no	few	yes	no	yes
St Elizabeth's Hospital	Richmond Va	50			50	2	Ap	Indef	1 yr	no	yes	ye	yes		
Lewis Gale Hospital Inc	Roanoke Va	40			40	1	Ap	April	1 yr	ye	yes	yes	yes	yes	yes
Fairmont Hospital No 3	Fairmont W Va	30	8	12	50	1	Ap	*	6-12 mo	no	yes	yes	ye	ye	ye
Milwaukee Children's Free Hospital [1]	Milwaukee Wi	yes	yes	ye	60	2	Ap	Indef	1 yr	yes	no	yes	yes	yes	yes
St Mary's Hospital	Oshkosh Wis	30			30	2	Ap	Indef	1 yr	no	yes	ye	yes	no	yes

1 Women interns admitted
2 Women intern only
7 Previous training required
10 Interns furnished from Harper Hosp

May and November
‡ Every six weeks
§ Medical nine months surgical and orthopedic six months

† April and November
Five years for men
(a) Per year

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, AUGUST 7, 1920

MEDICAL EDUCATION IN THE UNITED STATES

For the twentieth consecutive year we publish this week statistics dealing with medical education in the United States The statistics are complete, and one needs but to review them to note the many improvements that have been made since 1901, when the publishing of these statistics was begun

CHANGES OF THE YEAR

In all medical schools during the last session there were 14,088 students, or 1,036 more than during the previous session These increases are in the first, third and fourth year classes, smaller second year classes following naturally the small freshman enrolment in the fall of 1918 caused by war conditions The medical schools have passed the low ebb in enrolments which was expected with the enforcement of higher entrance requirements, and the pendulum is now swinging the other way It is encouraging to note that the increased enrolments have been most marked in Class A medical schools, the number enrolled this year having increased from 87 9 to 89 6 per cent of all students The percentage in Class B schools decreased from 8 3 to 4 8, and in Class C schools it increased from 3 8 to 5 6 The figures for Class C schools, however, are uncertain since they are based on unverified reports

The number of graduates this year was 3,047, or 391 more than in 1919 Note here, also, that the number of graduates of Class A colleges was increased by 470, while the numbers graduating from Class B schools decreased by 116 Of the Class C colleges, there were thirty-seven more graduates than in the previous year It is pleasing to note that the number of graduates holding degrees from colleges of arts and sciences increased from 1,180 to 1,321, which is 43 5 per cent of all graduates

The number of medical colleges is eighty-five, the same number as last year One Class B college [1] closed its doors, while a Class A college,[2] previously reported as having closed, determined to continue its existence for two more years

1 The College of Physicians and Surgeons of Los Angeles the College of Medicine of the University of Southern California

2 Fordham University School of Medicine New York City

CHANGES IN SIXTEEN YEARS

The improvements in medical education during the last sixteen years have been noteworthy In 1904, when the Council on Medical Education was created, the United States had more medical schools than all other countries of the world combined, the supply far exceeding the needs of the country While the number of colleges has been reduced from 162 to eighty-five during the sixteen years, the number enforcing an entrance requirement of two years or more of collegiate work increased from four (2 5 per cent of all colleges) in 1904, to seventy-eight (92 9 per cent) in 1920 The number of medical students was decreased from 28,142 to 13,052—the lowest number—in 1919, but, during the same period, the number who had higher preliminary qualifications was increased from 1,761 (6 2 per cent of all students) in 1904, to 13,408 (95 2 per cent) in 1920 The number of graduates was reduced from 5,747 to 2,656—the lowest number—in 1919, but the number having higher preliminary qualifications was increased from 369 (6 4 per cent of all graduates) in 1904, to 2,842 (93 3 per cent) in 1920 While the annual totals of colleges, students and graduates have been decreased by about 50 per cent, the number of better colleges is nineteen times larger than in 1904, and the numbers of better qualified students and graduates are nearly eight times larger

OTHER IMPROVEMENTS IN MEDICAL EDUCATION

Other improvements have also been made in medical schools Formerly, many had no university connection, were conducted for profit, or were dependent solely on students' fees Most of them had inadequate buildings and laboratory space, inadequate clinical material, and their curriculums were only partly graded At present, all but a few are integral parts of high grade universities, they are enjoying increased incomes, either from state appropriations or private endowments, many have erected new college buildings and installed more and better equipped laboratories, they have employed larger numbers of full-time teachers, the majority are now carrying on more or less effective research, all have established closer relationships with hospitals furnishing more abundant clinical facilities, and the majority have adopted better methods of teaching in both laboratory and clinical departments These changes are producing physicians who, both educationally and professionally, are far better equipped to assume the responsibility for the prevention and cure of disease than those graduating in any former period

COST OF MEDICAL EDUCATION

These improvements have naturally added largely to the cost of medical education Tuition fees have been increased by some of the medical schools, but not to so great an extent as to cover the cost of medical teaching, which is from three to several times what is charged for tuition fees The difference, of course, is met by state aid and private endowment The

increased fees, meanwhile, will not prevent any deserving student from obtaining a medical education through a lack of money During the last sixteen years, about 350 scholarships have become available in thirty-eight of our better medical schools, and generous loan funds have been provided for students of this class

FUTURE IMPROVEMENTS NEEDED

The World War materially emphasized the need of still further improvements, many of which were already recognized Not only should there be improved methods of clinical instruction in our undergraduate schools, but better and more abundant opportunities should be established for physicians to obtain graduate work Already courses are being established so that physicians can devote from one to three years to work in the various specialties Shorter courses should also be provided whereby physicians can devote their entire time during a few weeks or a few months to work along any narrow line of work in which they may be particularly interested The pressing need in medical education today is for better and more abundant opportunities for graduate medical education

NEW PROGRESS IN OLD FIELDS OF THERAPY

The recognized importance of digitalis in modern therapy is attested by the fact that digitalis preparations of some sort now form a part of the drug armamentarium of every physician Yet we suspect that few equally well known drugs are the subject of as much uncertainty and variation in efficacy in the hands of the "busy practitioner" Many decades have elapsed since Withering introduced digitalis into medical practice, but its therapeutic possibilities as well as its limitations are still worthy of renewed careful study

Some of the progress in the field of digitalis therapy was summarized [1] at the New Orleans session of the Association Foremost, perhaps, is the growing recognition of the need of pharmaceutic digitalis preparations of known potency Now that the crude leaves which contain the active drugs are collected in many places where they are grown under a diversity of agricultural conditions, it would be surprising, indeed, if the content of potent principles were not variable in different lots Under these circumstances, galenic preparations must necessarily vary with the leaf from which they are prepared Thanks to the development of appropriate methods of physiologic assay, however, digitalis preparations can now be evaluated in terms of their real potency In this way it has been ascertained that pharmacy no longer is dependent on restricted areas for drug plants, furthermore, products can be prepared which are stable and constant, as pharmacopeial standards demand

Again, the physician has learned largely through the leadership of Cary Eggleston,[2] how to estimate digitalis dosage on the basis of body weight, whereby the haphazard guesswork of "drops per day" has been improved on Furthermore the desirability of employing the drug in doses sufficient to produce the requisite beneficial results is being emphasized as never before As the possibilities of overdosage can be recognized by the occurrence of symptoms such as nausea, or with greater refinement by the electrocardiogram, it becomes possible to push the dosage speedily to the limit of tolerance with corresponding therapeutic advantages Under proper control the estimated amount of digitalis has even been given in a single dose so that effects which ordinarily require a week for their manifestation may be obtained within thirty-six hours [3] There remains the important need of differentiating more clearly the patients for whom digitalis is actually indicated, so that it may be used both wisely and well Finally, the medical observer should learn from the history of digitalis therapy that even in the long tilled fields of practice, experience and investigation may be applied to yield information that is new and useful

THE DIETARY VALUE OF FRUITS

"Why do we eat fruits?" Few persons have stopped to consider the answer to this question, and it is somewhat doubtful, whether an entirely satisfactory reply can be formulated It requires only a moment's reflection, however, to conclude that any group of food products which enters so extensively into the dietary of mankind must have some virtue worthy of notice Investigators are agreed that the fruits do not rank high as sources of energy to the body Otherwise expressed, their calory values are rather low in comparison with the preponderance of the common food products The fruits are almost without exception devoid of fats and poor in protein, at most the true nutrients are represented by a small content of carbohydrate, such as the sugars in the banana and the orange Water forms a large part of their make-up in every instance

Writers on nutrition in the past have been accustomed to refer to the value of the "mineral nutrients" in fruits although it would be difficult, indeed, to make any unique claims for them in this respect Of lime or phosphoric acid, for which the body is most likely to feel a need at times the fruits surely cannot be regarded as valuable contributors Many of these plant products contain organic acids, notably in the case of the citrus fruits To these dietary tradition has ascribed a laxative potency When it is recalled however that most of the fruits also contain more or less indigestible vegetable constituents such as waxes gums and cellulose-like carbohydrates one may well be inte

1 West H F and Pratt J H Clinical Experience with a Standardized Dried Aqueous Extract of Digitalis J A M A 75 77 (July 10) 1920

2 Eggleston Cary Digitalis Dosage Arch Int Med 16 1 (July) 1915

3 Robinson C C Am J M Sc 159 1 (Jan) 1920

to choose between organic acids and "roughage" for an explanation of the laxative action popularly accepted

Certain fruits, as well as a number of green vegetables, have long been understood to exhibit a quite different potency best expressed in their antiscorbutic effects The latter are now ascribed to vitamins, that group of as yet ill-defined properties or substances which promote well-being in ways that still require elucidation However indefinable it may be at present, the role of orange juice in averting disaster under certain conditions of feeding or in promoting the nutrition on certain dietary regimens is beyond dispute

Aside from the recognized value of various fruits as antiscorbutics,[1] a reason why they may be used liberally in the diet is given in the new investigations of Osborne and Mendel[2] They have demonstrated that the fresh juices of the edible parts of the orange, lemon and grapefruit contain the vitamin frequently spoken of as water-soluble B or antineuritic vitamin The efficiency of these juices is not lost by suitable modes of desiccation It is, indeed, surprising to learn that the potency of orange juice, for example, in the water-soluble vitamin, is comparable, volume for volume, with that of cow's milk This must not be understood, of course, to apply to the nutrients as sources of energy, but only to the content of vitamin It is even hinted that orange juice may contain some fat-soluble vitamin, if so, it will have been demonstrated to yield all the at present known types of vitamins Little wonder that this citrus fruit has acquired a dietary popularity The advocates of a national temperance drink may be disappointed in the relatively poorer showing of grape juice as a source of the vitamin

Apples and pears are not devoid of vitamin of the water-soluble variety, though they cannot be rated as rich in this food factor Prunes are apparently somewhat richer in it Osborne and Mendel justly remark that the new observations with fruits place the dietary value of these foods, hitherto recommended because of their salt content, their laxative properties, or their antiscorbutic property, in a new light as sources of water-soluble vitamin It is not justifiable to ascribe superior virtues in this respect to all fruits, for the banana has already been found lacking in pronounced vitamin potency What a vitamin-containing product like the orange may contribute to nutrition in man has been demonstrated in the growth of infants by Byfield, Daniels and Loughlin[3] The fruits, always regarded as palatable, are having their real worth established at length in a scientific way

1 Scurvy and Antiscorbutics editorial J A M A **71** 2000 (Dec 14) 1918 Further Facts Regarding Anti corbutics ibid **72** 728 (March 8) 1919 Antiscorbutics I ibid **73** 271 (July 26) 1919 II ibid **73** 338 (Aug 2) 1919 The Preservation of Antiscorbutic Fruit Juices ibid **73** 538 (Aug 16) 1919

2 Osborne T B and Mendel L B The Occurrence of Water Soluble Vitamines in Some Common Fruits J Biol Chem **42** 465 (July) 1920

3 Byfield A H Daniel Amy L and Loughlin Rosemary The Antineuritic and Growth Stimulating Properties of Orange Juice Am J Dis Child **19** 349 (May) 1920

Current Comment

HOSPITALS PROVIDING ACCEPTABLE INTERNSHIPS

We publish this week a list of the hospitals which, after careful consideration by the Council on Medical Education and Hospitals, have been considered in position to furnish satisfactory internships for medical graduates This is the fourth revision of the list first printed in pamphlet form in 1914 Since that time, however, more complete data have been secured so that the present list is correspondingly more reliable The list includes 593 hospitals having a total of 361,162 beds and providing opportunities for 3,420 interns Those listed represent only about 10 per cent of all hospitals in the United States having ten or more beds, although they have about 50 per cent of the total bed capacity Altogether, only 1,126 out of the 6 440 reported that they desired to have interns, and only 593 were found in condition to furnish satisfactory intership Some did not send reports on which a reliable decision could be made For a general training the student is urged to enter one of the 469 general hospitals The state and special hospitals are better for those who have already had their general internships but who wish to secure further training in some particular specialty This list will undoubtedly be of great service to medical students in selecting a hospital where a satisfactory internship can be obtained

THE HOSPITAL INTERN PROBLEM

As noted in the previous comment, 593 of the 6,440 hospitals in the United States require annually 3,420 interns, or about 400 more than are turned out this year by the medical schools Nevertheless, these hospitals represent a very small proportion of all hospitals in the country, and the number seeking interns is increasing It can be seen, therefore, that the number of students graduating annually is not sufficient to supply interns for all the hospitals seeking them, far less to meet the demand if all general hospitals should desire to use them This, meanwhile, is one of the bases for the claim that there is a dearth of physicians It can readily be seen, however, that sufficient interns could not be provided for all hospitals even if the annual number of graduates exceeded by several times the normal output for this country The intern problem must be solved in some other way Many hospitals, even now, are employing physicians as residents or house officers at increasing salaries or with gradually increasing privileges in the way of practice Interns, also, should be relieved of much of the work required of them which should be done by orderlies employed for that purpose History-writing and records, which have depended largely on intern service, can be kept up by staff physicians through the use of stenographers It is certain that the increased demand for interns does not justify either the lowering of educational standards or a multiplication of medical schools

BENEFITS FROM MEETINGS OF PROFESSIONAL ORGANIZATIONS

The president of the American Bar Association[1] in an open letter to the members, defines that organization as the "tie of fraternal interest in all that concerns the profession that binds it together." While the communication is addressed to members of the legal profession, its truth applies equally to physicians. The following statement regarding the value of the annual session is paraphrased but little in order that it shall appeal to Fellows and members of the American Medical Association:

> The sight of the leaders of the medical profession is stimulating. It adds much to the interest with which a medical paper is read if the author is not an abstraction but a creature of flesh and blood whose personal appearance is known and whose voice has been heard. Of these things I am sure: that the sense of brotherhood and the belief in the friendliness and nobility of the profession will be strengthened by such contact, and that faith in the zeal and integrity of members of the profession will be justified by experience. The reserve potential strength of a profession like ours can be summoned to effective exercise only through an association, national in scope, and wielding the consolidated strength of a united and thoroughly patriotic organization.

The meetings of the constituent state medical associations and of the component county medical societies present opportunities both for an interchange of professional knowledge and for an appreciation of personality which must make all better fitted to render professional services to their fellow men.

CAREERS FOR MEDICAL MEN

The higher educational qualifications now required of medical students and the greatly improved methods of instruction have resulted in multiplying the careers, aside from regular practice, which are now open for graduates of medicine. At the present time, for example, the graduate may enter the medical service of the Army, the Navy or the Public Health, Canal Zone or Indian services, he may find a special opportunity in industrial medicine, in insurance, as a school physician, in public health work, on hygiene boards, in administrative work in general hospitals, or as a medical attendant in an institution for the insane, the crippled or the feebleminded. There is also an increasing demand for medical missionaries and for medical teachers abroad. There is a growing demand for medical teachers and unusual opportunities in medical research. There is an increasing number of research institutes, providing special advantages with fair incomes for physicians especially qualified for investigative work. So many, indeed, are the opportunities for the well educated physician, aside from regular practice, as to more than justify the present reasonably high standards of preliminary and medical education. The great increase in the number of careers open to medical men are not only benefiting larger numbers of well trained graduates in medicine but also, through their activity and influence, insuring a better understanding in the future of problems relating to public health and the prevention and cure of disease.

1 Carson, H. L.: Reasons for Joining the American Bar Association, July, 1920.

THE DIGESTION OF EGG WHITE BY INFANTS

In the progress of the sciences on which medical knowledge is based many traditions and items of empiric information have received justification often most unexpectedly, by the discovery that they are based on significant truths. On the other hand the enlargement of the horizon of verifiable facts has not infrequently resulted in discrediting prejudices and preferences that have been fostered without demonstrable justification. Thus, uncooked starch has categorically been classed as a substance indigestible in the human alimentary tract and therefore to be shunned as a dietary component. Yet in a recent issue of THE JOURNAL[1] the untenability of this long taught assumption was pointed out on the basis of unexceptionable evidence that healthy men can ingest, without detriment, quantities of raw starch exceeding 200 gm. a day. The myth that infants lack an amylolytic enzyme in their saliva has disappeared before actual investigation of the child rather than by reading a textbook. In fact, we suspect that more than one infant has been given some uncooked starch in the form of cereal decoction without untoward effects. Another tradition of the impotence of the alimentary apparatus in infancy has been broken by Grulee,[2] who has examined the stools after feeding egg white. Despite the fact that the extremely delicate precipitin test was used the raw protein was found to have disappeared from the bowel in almost every case in which the quantity of egg protein ingested was not unduly large. As Grulee concludes, it would seem from his studies that egg albumin is as a rule broken down completely by the digestive processes in infants and children. This holds good even when egg white is used in small quantities for the new-born. The alternative that egg albumin is completely absorbed unchanged is unlikely.

NO DEARTH OF PHYSICIANS

The rapid decrease in the enrolments of medical students and in the number of physicians graduating annually during the last sixteen years has been frequently misinterpreted as having resulted in a scarcity of physicians in the United States. But what are the facts? In 1904, it will be remembered this country had more than half the world's supply of medical schools, many of these were conducted for profit, competition was strong, solicitors visited offices, factories and crossroads to bring in students. As a result, medical schools were crowded far beyond the normal needs. Then came the campaign for improvement. Mergers of medical schools began to take place, others of extremely low grade ceased to exist, and higher entrance requirements were generally adopted. It was expected that the numbers of medical colleges, students and graduates would be considerably reduced. At the same time, the annual number of graduates with higher educational qualifications was largely increased. The only time in several decades when the demand for physicians exceeded the supply was during the brief

1 Behavior of Uncooked Starch in the Digestive Tract: Current Comment, J. A. M. A., 75: 111 (July 10), 1920.

2 Grulee, C. G.: Precipitin Test for Egg Albumin in Stools, Am. J. Dis. Child., 20: 15 (July), 1920.

period of the war, but then the demand was equally great for skilled workers in all other lines of human endeavor, except during the severe influenza epidemic There is no scarcity of physicians so far as numbers are concerned, and the supply of better qualified medical men is being rapidly increased Meanwhile, as shown by the statistics published this week, the pendulum is swinging back and the numbers of both medical students and graduates show marked increases over the previous year It is satisfactory to know, however, that the increased quantity represents also an improved quality from the standpoint of both preliminary and professional education

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS EDUCATION PUBLIC HEALTH, ETC)

DISTRICT OF COLUMBIA

Tribute to Dr Kober—On the occasion of the seventieth birthday of Dr George M Kober, March 28 his pupils, friends and co workers in the Medical Society of the District of Columbia and allied scientific societies and civic organizations, at a dinner in his honor, tendered him a silver loving cup as a testimonial of their admiration and esteem The same friends have joined in issuing an anniversary volume, which has just come from the press as the George M Kober anniversary number of the *American Journal of Physical Anthropology*, of which Dr Kober has been an associate editor since its inception Besides a number of scientific articles dedicated to Dr Kober the volume contains an account of the special tributes recently paid to Dr Kober and recounts his work for the cause of scientific medicine, public health and social welfare

ILLINOIS

Clinics to Be Established—A venereal disease clinic has been opened in the courthouse at Rock Island under the supervision of Dr Daniel F Paul——Children of Rock Island suffering from tonsillitis or other throat infections may receive free treatment at a clinic to be established at St Anthony's Hospital under the charge of Drs Daniel F Paul, Lewis Ostrom, Jr, Charles E Robb and Carl J F Rochow

Mobile Diagnostic Laboratory—The mobile diagnostic laboratory maintained by the division of diagnostic laboratories of the state department of public health is proving of great value, not only in the suppression of epidemics, but in the rapid and accurate completion of communicable disease surveys Under the present arrangement a laboratory technician may be at any point in the state within a very short time carrying with him all necessary material This traveling laboratory is so equipped that it may be in active operation immediately after arrival

Childbirth Mortality During the Influenza Epidemic—The division of vital statistics has made a detailed investigation of the mortality of women in the puerperal state and of children prematurely born or dying during gestation, on account of the influenza and influenza-pneumonia epidemic During the epidemic of January and February of this year, in the state outside of Chicago, there were 210 deaths of mothers and 171 deaths of infants from this cause, or a total of 381 Excluding Cook County the highest mortality was in Williamson County with 17 deaths and the next highest in Winnebago County with 15, Lake County was third with 14, LaSalle County fourth with 13, and Kane County fifth in order with 11 deaths

INDIANA

Hospital Reopened—Goshen Hospital which has been closed on account of a difference of opinion between the board of directors and the physicians of the staff, has been reopened under the management of Mrs Laura Fell White

Chemical Research Workers Organize—A new medical society has been organized in Indianapolis to emphasize the value of chemical research It is composed of members of the Indianapolis Medical Society who are interested in that branch of the profession and starts out with a charter membership of more than sixty-six Dr Murray Hadley is president and Dr Homer Hamer, secretary-treasurer

MONTANA

Honor Medical Guests—A dinner in honor of physicians visiting in Butte after the state medical society meeting at Helena was given by members of the staff of the Murray Hospital at the Butte Country Club July 16 The guests of honor were Drs Melvin S Henderson, Rochester, Minn, Cresswell T Pigot Roundup president of the state medical society, Elmer G Balsam Billings, secretary of the society, and George E Brown, Miles City

Tuberculosis Fighters Elect Officers—At the annual meeting of the Montana Association for the Study and Prevention of Tuberculosis held in Helena, July 12, the following officers were elected president, Mr H R Cunningham Helena, honorary vice presidents Gov S V Stewart and senators T J Walsh Helena and W A Clark, Butte, vice presidents, Mrs P H McCarthy Butte and Drs Lewis Allard, Billings, and Oscar M Lanstrum Helena, secretary, Mrs Sara E. Morse, and treasurer, Mr T O Hammond, Helena

State Health Board Building Dedicated—The newly completed state board of health building at Helena was dedicated with impressive ceremonies July 12 The principal addresses were delivered by Prof W M Cobleigh, Bozeman state chemist, on 'The Relation of the Montana Public Health Association to the State Health Agencies", the governor, Chairman Dan D Donohue Butte, president of the state board of health, Dr James A Hayne, Columbia, S C, state health officer of South Carolina, Dr Henry M Bracken, Minneapolis of the War Risk Bureau, Dr Edward M Larson, Great Falls president of the state medical association, Mr Harry Call head of the state Red Cross, Dr Oscar M Lanstrum, Helena, and chancellor E C Elliott of the state schools

NEW YORK

Counsel of State Society Resigns—*James Taylor Lewis*, Esq, for the last twenty years legal adviser of the Medical Society of the State of New York has resigned to take effect September 1 Mr Lewis has been compelled to resign because the society has declined to increase his salary to keep up with the ever increasing expense connected with the conduct of his office

Personal—Dr Samuel W Hamilton formerly a member of the staff of the Utica State Hospital, has been appointed chief medical director of the Hospital for Mental Diseases, Philadelphia——Dr Halsey J Ball, Glens Falls, has been appointed sanitary supervisor of the district which includes the counties of Oneida, Herkimer, Madison and Otsego——Dr G Walter Zulauf assistant superintendent of the Buffalo General Hospital, has been appointed superintendent of the Allegheny General Hospital, Pittsburgh, succeeding Dr John M Lawler, resigned

New York City

Jewish Memorial Hospital Acquires Property—Inwood House an institution for unfortunate mothers and infants on Two Hundred and Eighth Street, has been sold to the Jewish Memorial Hospital for $260,000 Possession will be given December 1

Police Sanatorium.—Police Commissioner Richard E Enright announces that a sanatorium for members of the metropolitan police force who become disabled by accident or disease will be erected in the Catskills or Adirondacks out of funds raised by the police field games this year

Hospital Buys Seaside Home—The directors of the Memorial Hospital, Brooklyn have purchased the former home of the Children's Aid Society at Coney Island They announce that a campaign will soon be started to raise funds to convert this building into a well-equipped hospital with accommodations for 150 patients

Physician Obtains Writ—Dr Melville A Hays has obtained a writ requiring the state prohibition director to show by what authority he refused to issue to Dr Hays a

book of prescription blanks for liquor in accordance with the prohibition law Dr Hays claims that the blanks have been withheld in keeping with the policy of refusing to permit a physician to write more than 100 prescriptions for liquor within three months

Personal—Dr Samuel W Hamilton, Manhattan medical director of the national committee for mental hygiene, has been appointed medical inspector in hospitals for the insane with a salary of $5 000——Dr Otto U Hoffman Brooklyn, has resigned as dean of Long Island College Hospital, and has moved to New York City, to continue the practice of internal medicine——Dr Royal S Copeland, commissioner of health, returned from his trip to Europe July 15——Dr Jacob Geiger has been appointed director of the pathologic laboratories of the New York Diagnostic Clinics

NORTH CAROLINA

Personal—Dr Everett F Long Lexington whole-time health officer of Davidson County, has resigned to accept the same position with Wake County, including the city of Raleigh——Dr William H Scruggs Jr, Asheville, has resigned as health officer of Buncombe County——Dr Andrew J Warren health officer of Charlotte, has resigned to take effect not later than October 1 to accept a position with the Rockefeller Foundation——Dr Robert A Herring has been appointed health officer of Wilmington

Hospital Items—Dr Raymond L Pittman, Fayetteville, announces the early completion and opening of the Pittman Hospital——Mr Fred L Seely, Asheville announces his purpose to construct and equip at Asheville an orthopedic hospital to contain at the beginning fifty beds and be open to crippled children without regard to residence Dr W Pinkney Herbert and other leading Asheville surgeons will constitute the staff of the new institution——Drs Arthur T Pritchard and James G Anderson Asheville, announce the early erection of a general medical and surgical hospital to cost $100 000 It will be of modern fireproof construction, and four stories high——The Meriwether Hospital Asheville, has recently become the property of Dr Eugene B Glenn, who has bought out the interests of the other owners Dr Glenn has announced his intention to continue the operation of the institution without change in the staff or management, but with improvements and additions to the equipment

OHIO

Personal—Dr Joseph H Wilson Bellefontaine, is seriously ill as the result of a cerebral hemorrhage, July 16

Ambassador to Visit Cincinnati.—At the celebration of the one hundredth anniversary of the founding of the Medical College of the University of Cincinnati to be held in Cincinnati November 4 Sir Auckland Geddes, ambassador to the United States from Great Britain, is to be the principal speaker

OKLAHOMA

Examining Board Election—At the annual meeting of the Oklahoma State Medical Examining Board held in Oklahoma City, July 14 Dr Lewis E Emanuel, Chickasha, was elected president, Dr William T Ray, Gould, vice president, Dr James M Byrum Shawnee, secretary (reelected)

Physician Loses License—The Oklahoma State Medical Examining Board on July 14, is said to have revoked the license of Dr John M Lee, Oklahoma City on account of claims of the Electro-Medical Doctors Institute, Tulsa, to cure gallstones and kidney disease by an electrical process, with which institute Dr Lee was connected

Physicians Must Report Venereal Diseases—Under the rules which became effective July 1, and which have been promulgated by the state health commissioner physicians of the state are required to report to the state health officer every case of venereal disease or kindred afflictions Persons found infected will be detained and subjected to treatment and penalties are provided for violation of these rules

PENNSYLVANIA

Personal—Dr W S Moore, Washington has been appointed a medical missionary to Egypt under the United Presbyterian Board of Foreign Missions and will sail in September——Dr William J Crookston Pittsburgh, associate medical director of the state health department has been appointed chief of the division of tuberculosis clinics succeeding Dr Karl Schaffle, Camp Hill——Dr Joseph J Meyer has been appointed chief of the genito-urinary dispensary, Johnstown——Dr Samuel S Hill Wernersville superintendent of the South Mountain Asylum for Chronic Insane has been appointed chairman of the Berks County Chapter American Red Cross——Dr Thomas H A Stites medical director of the State Tuberculosis Sanatorium at Hamburg since 1914 has resigned effective August 1 and has entered the U S Public Health Service with the rank of surgeon

Philadelphia

Hospital Item—Waynesboro has secured more than $200 000 of the $300 000 required for its new hospital——The Reading Hospital building fund has now more than $400 000 of the $750 000 required

Personal—Dr Chevalier Jackson professor of laryngology at Jefferson Medical College has been appointed professor of bronchoscopy in the University of Pennsylvania but will not sever his connection with Jefferson Medical College——Dr David A Smith has been appointed chief resident physician at the University Hospital Philadelphia——Dr John E B Buckenham has resigned as superintendent of the Hospital for Contagious Diseases to become librarian of the Masonic Grand Lodge of Pennsylvania——Dr John Wanamaker III has been reinstated as police surgeon by Director Cortelyou ——Dr John D Donnelly has been appointed pediatrician at the State Tuberculosis Clinic

TEXAS

More Deaths from Bubonic Plague—Two additional deaths from bubonic plague were announced July 29 in Galveston by P A Surg J Holmes Smith U S P H S This brings the total number of cases to five four of which have proved fatal Both of the deceased were Mexicans

Contribution for Venereal Disease Work Necessary—Dr Oscar Davis of the state health department Austin has informed the city council of Houston that it will be necessary for the city to contribute $12 000 if the venereal disease work is to be carried on for the remainder of the year For nearly two years the city has furnished half of the annual amount needed to carry on the work and the federal government one half The government appropriation for the work is now said to be exhausted

VIRGINIA

Medical Officers Club Organized—At a meeting held recently at Hampton Roads Yacht Club, Willoughby Beach, the Medical Officers Club of Norfolk was organized with an initial membership of fifty Lieut-Col Junius F Lynch was elected president and Capt James L Stringfellow, secretary

Appropriation for Inspection and Correctional Work.—The executive committee of the state board of health on July 13 adopted a resolution providing that the sum of $20 000 be appropriated to be used as state aid to counties or communities for medical and physical inspection and correctional work through the public schools This financial aid is limited to one half of the amount appropriated for the same purpose by the local authorities

Improvement of Health of Convicts—A conference was held at the state penitentiary, July 12 to endeavor to bring about ideal health conditions at the state penitentiary the state farm, and the various convict camps At this conference were representatives from the board of directors of the penitentiary the president faculty and board of trustees of the Medical College of Virginia the state department of health the U S Public Health Service and the Medical Society of Virginia

Personal—Dr William P Caton Accotink field director for the state department of health of the Pittsylvania County unit has been appointed health officer of Fairfax County succeeding Dr Edward L Flanagan Richmond resigned——Dr James H Hargrave, Petersburg charged with the performance of a criminal operation was found not guilty July 1 ——Dr Dean B Cole Chilhowie executive secretary of the state tuberculosis association has resigned to accept a position on the resident staff of the Bellevue Hospital New York City

WASHINGTON

Personal—Dr James E Crichton, Seattle formerly vice chairman of the Seattle Red Cross [illegible] Mr Earl Kilpatrick as division manager [illegible] ——Dr Frank A Plum Seattle [illegible]

director of the City Hospital, Philadelphia, succeeding Dr Paul A Turner, resigned

Trudeau Society Election—The Washington Trudeau Society was organized at the closing session of the annual convention of the Washington Tuberculosis Association at North Yakima, July 9 Membership in this society is restricted to physicians who confine their practice to tuberculosis, and the following officers were elected president, Dr Fredericka Slyfield, Seattle, vice president, Dr Frank M Miller, Spokane, honorary vice presidents, Drs Edward R Baldwin, Saranac Lake, N Y, and Christen Quevli, Tacoma, secretary, Samuel J Cary, Seattle, and treasurer, Dr Leon G Woodford, Everett

WYOMING

State Society Meeting—The Wyoming State Medical Society will hold its eighteenth annual meeting at the Elks' Home, Cheyenne, August 9 and 10, under the presidency of Dr George P Johnston, Cheyenne On the first evening the delegates will be entertained at dinner at the Cheyenne Country Club, by the Laramie County Medical Society Among the visiting speakers will be Drs James M Patton, Omaha, whose subject is "The Doctor and the Adult Blind", Josiah N Hall, Denver, who will present a paper on 'The Diagnosis of Empyema" with roentgen-ray pictures and Dr Thomas E Carmody, Denver, who will speak on "Focal Infections"

CANADA

New Professors from Great Britain—Principal Bruce Taylor of Queens' University, Kingston Ont, and Dr Walter T Connell are in England and have engaged Dr James Miller, Edinburgh for the chair of pathology, and Dr L J Austin, London, for the chair of clinical surgery at the university Additional important appointments are shortly to be made

Public Health News—During the five year period from 1914 to 1918 and excluding influenza, tuberculosis claimed more lives in Saskatchewan than any other communicable disease The average death rate for tuberculosis was 45 per hundred thousand as compared with 6.2 for measles, 8.2 for whooping cough, 8 2 for diphtheria, and 8 8 for typhoid fever There is a steady increase in the death rate from tuberculosis from year to year In 1914 it was 35 2 per hundred thousand, 1915, 38.2, 1916 44 6, 1917, 47 4, 1918, 54 5, making the average for the period 45

Hospital News—St Michael's Hospital, Toronto, has in view enlargement of that institution provided the serum treatment of cancer as introduced by Dr Thomas J Glover, Toronto, proves a permanent success Dr John A Amyot, Ottawa, deputy minister of public health, has paid a visit to Toronto and inspected the patients, microscopic specimens and pathologic exhibits and expresses his opinion that the serum is promising The hospital authorities have asked Dr Julian D Loudon Toronto, chief in medicine, to work with Dr Glover and Dr Edmund E King Toronto, surgeon to the hospital, has also been pressed into service in the cancer clinic

Personal—The Canadian Red Cross Society has appointed Dr Ruggles K George, Toronto as director of information on public health——Dr Peter MacNaughton, formerly assistant superintendent at the Hamilton Ont, Hospital for the Insane, has been appointed superintendent of the Coburg Hospital, which was formerly the Ontario Military Hospital, but which has been made a provincial hospital for insane—— Dr William K Ross of the Kingston Provincial Hospital for the Insane, has been appointed superintendent of the Brockville Hospital for the Insane, succeeding the late Dr John C Mitchell Dr Fulton S Vrooman, who has been assistant superintendent at Brockville, has been transferred to a similar position at the Toronto institution Dr George E Kidd on the staff at Brockville, succeeds Dr Vrooman and Dr Robert D Fletcher, Winnipeg, Man, goes to the Toronto institution as an assistant physician

GENERAL

Secretary of American Medical Association Undergoes Operation—Dr Alexander R Craig was operated on August 4 for cholelithiasis As we go to press his condition is reported as favorable

Diagnosis School Established—On account of the numerous tuberculosis activities which have centered recently in Springfield Ill this city has been selected by the United States Public Health Service as the location for a school of diagnosis for acting assistant surgeons and local examiners assigned to the care of sick and wounded soldiers in the eighth district, comprising the states of Michigan, Wisconsin and Illinois

Warning—A Texas physician sends the information that a man calling himself J P McLay and claiming to be a representative of the Jones Service Company of Kansas City is traveling in Texas, selling a service fee for $70 He suggests that this may be the same individual against whom a warning was issued in THE JOURNAL, July 24, under the name of J P McKeen

Emergency Dressing Parcel—A standard emergency surgical dressing parcel has been adopted by the American Red Cross, and endorsed by the Surgeon-General of the Army, the Section on Surgery of the American Medical Association the American College of Surgeons, and the Conference Board of Physicians in Industrial Practice The parcel is wrapped in heavy brown paper, sterilized and paraffined, and contains ten gauze compresses, one absorbent pad one rolled wadding bandage, one muslin bandage one gauze bandage, one triangular bandage and one safety pin

Appropriation for Social Hygiene Work—In the sundry civil bill the sixty-sixth Congress appropriated $1,565,000 to the United States Interdepartmental Social Hygiene Board for use during the fiscal year ending June 30, 1921 This includes $80 000 for the expenses of the board, $400 000 for assisting states in protecting the military and naval forces of the United States against venereal diseases, $750 000 for allotment to the various states for the prevention treatment and control of venereal disease, $85,000 for payment to universities, colleges and other suitable organizations and institutions to discover more effective measures in the prevention of venereal disease, and $250 000 for payment to universities, colleges and other suitable institutions and organizations to discover and develop more effective educational measures in the treatment of venereal disease

FOREIGN

Gasoline Privileges for Physicians—Farmers, physicians and veterinarians are given priority in the distribution of gasoline in France, according to a recent decree

Appropriation for Work on Heredity—The Prussian Academy of Sciences has granted Dr Agnes Bluhm 1 000 marks to continue her experimental work on problems of heredity

Tribute to Depage—In recognition of Depage's work at the hopital de l'Ocean, in the narrow strip of Belgium that was not invaded by the enemy, his pupils and friends are planning to present him with a torso bust, the work of a leading Belgian sculptor

Tribute to Pérez—Our Vienna exchanges mention that the university authorities recently held a special meeting in honor of Dr F Perez the ambassador from Argentina in Vienna, in token of gratitude for his efforts on behalf of the university Perez name is associated with the bacteriology of ozena

Disease Menaces Italian Charcoal Burners—Pellagra, malaria and influenza are said to have caused the deaths of many Italian charcoal burners in the district of Citta di Castello during the last few months This is believed to be due to the universal diet of polenta and life in the unhealthy marshes surrounding the town

Petition to Name a Street for Surgeon—The *Paris medical* relates that twenty of the members of the municipal council of Paris have signed a petition asking that some street in Paris be named for Dr H Morestin in token of appreciation of his services during the war, so many persons owe to him the reconstruction of their faces

International Surgical Congress—At the meeting of the Fifth International Surgical Congress, held in Paris July 19 to 22, representatives of thirteen nations presented papers During the mornings clinics were held in the various hospitals of Paris in the afternoons and evenings, the scientific program was carried out Sir William MacEwen, professor of surgery in Glasgow University, was elected president, and London was selected as the next place of meeting, the date being fixed as July 16 1923

Swedish Government Aids Medical Journals—The *Svenska Läkartidningen* records the appropriation by the government of 5 000 crowns to aid the Swedish Medical Association in publishing its three journals the semimonthly quarterly and transactions Three journals devoted to hygiene are given from 1 000 to 1 500 crowns and four specialist journals from 500 to 1,200 To aid in starting the new *Acta Oto-Laryn-*

gologica, 4,000 crowns are appropriated Each of the journals specified is to donate a number of copies to the university libraries

Medical Journals Increase Subscription Price—The medical section of the Italian Association of the Scientific Press has been considering that the cost of paper has gone up 1,000 per cent and of printing 300 per cent, with other expenses increasing to correspond, and consequently it has voted to increase by 100 per cent the subscription price of the Italian weekly medical journals for the last half of 1920, even for the subscribers already enrolled Other journals not published so often are to have the subscription price increased by 50 per cent The notice appears in the *Policlinico* of June 28, signed by Prof G Sanarelli, president of the association

Medical Center in Constantinople—Americans in Constantinople have established a hospital as the nucleus of a medical center in the Near East Admiral Bristol, the American high commissioner, is chairman of the board of directors which includes representatives of the American Chamber of Commerce, the American Red Cross the American Committee for Relief in the Near East, the Constantinople College for Women, various missionary boards and Robert College The equipment for the hospital, which will have a capacity of 100 patients is to be supplied by the American Red Cross and the personnel by the American Red Cross and American Committee for Relief in the Near East Dr A R Hoover will be director of the hospital and Dr Elfie Richards Graff, assistant director

Deaths in Other Countries

Dr J Bjerrum, the leading ophthalmologist of Denmark, aged 68 Bjerrum's method of perimetry, test types etc, and his manuals of ophthalmology have made his name familiar He retired from his chair in the medical faculty of Copenhagen in 1910——Dr L Rydygier, professor of surgery at the University of Lemberg a pioneer in resection of the stomach and of invagination aged 70——Dr J B Miranda, formerly professor of toxicology and pharmacy in the medical faculty of Santiago, Chile, at an advanced age

Government Services

Hospitals to Take War Risk Cases

Sixteen naval hospitals have been notified that they will be expected to take in war risk cases for reconstruction, provided they have sufficient available personnel These patients are to be in addition to Navy or Marine Corps patients There are at present 3,200 beds available at naval hospitals When accommodations can be furnished local representatives of the Bureau of War Risk Insurance will be notified

Return of General Gorgas' Body

Instructions have been issued for the United States Army Transport *Pocahontas* to stop at Southampton, England on its return from Europe to take on board Mrs Gorgas and the body of General Gorgas The *Pocahontas* was expected to touch at Southampton about *July 26* The final arrangements for General Gorgas' funeral will not be announced until the arrival of the body in the United States, but the interment will be at Arlington

Schools for Medical Officers

Arrangements have been made with the Surgeon-General that not to exceed five medical officers of the National Guard may attend the course at the Army Medical School Washington, D C, which begins on or about October 1 and continues about eight months Applications through the Adjutant-General of the respective states should be made to the Militia Bureau before September 15——The Adjutant-General of the Army has approved the application of the Surgeon-General for the development of the field school for the medical department on the Carlisle, Pa military reservation Notice will be given later of the opening of this school National Guard officers may attend this school and will be entitled to the same pay (not above that of captain) quarters etc, while actually in attendance at the school and the same travel allowances to and from the school as are allowed officers of the Regular establishment

Foreign Letters

LONDON

(From Our Regular Correspondent)

July 17, 1920

The Increased Subscription of the British Medical Association

As stated before, the subscription to the British Medical Association has been increased by 50 per cent—from $10 50 to $15 75 The reasons given are the depreciation in the value of money and increase in virtually all forms of expenditure Comparing the year 1919 with 1918 the cost of printing increased by $20 000 paper by $17 500 staff expense by $10 000 and meetings of the council and committee by $11 500 These items with increased capitation grants to branches amounted to a total increase of $65 000 Against these increased expenses there was an increase of subscriptions of about $10,000 and from advertisements and sale of the *Journal* of $45 000 For the year 1920 the estimated expenditure is $435 000 and income $418 000 Almost every item of expenditure is expected to be increased Moreover there are new items of expenditure—a Scottish office with a whole-time secretary which will cost $6 000 a year, an intelligence department costing about $4 000 a year and the newly established lectures which cost probably $1 000 The increased annual expenditure for 1920 may easily prove to be $75 000 If the subscription were not raised a net increase of 1 000 members would be expected in 1920 The average number of resignations from the association in recent years has been 472 In 1913 when the subscription was raised from $6 to $10 50 the number of resignations was 2 675 It may be concluded, therefore that the increased subscription will cost the association 2,200 members The membership is now more than 22 200, so that if the same number leave the association it would be left with a membership of 20 000 Allowing 7 000 for oversea members and those who pay a reduced fee as junior members of the profession the association would have $68 000 additional income A smaller increase of subscriptions would meet the immediate needs, but it is considered necessary to have a reserve so as to be able to meet additional demands without further increase of subscription

Failure of Sanatorium Treatment

Dr W H Dickinson medical adviser of the insurance committee of Newcastle on Tyne gives a depressing picture of the prospects of the industrial consumptive Out of 1 086 patients, only fourteen in whom tubercle bacilli were found in the sputum had secured arrest" of the disease and were still alive and well when the report was completed Even this is not the worst for in respect of six of these there was some doubt as to the accuracy of the original observation, leaving only eight certain cases This gloomy outlook is further illustrated by the histories of 1 126 patients, of whom 733 died while receiving sanatorium benefit and a further sixty-four died after discontinuing the treatment making a total of 797 known deaths Treatment was stopped on account of arrest' of disease in only 108 instances Of these persons eighty-one are now working or fit for work four are known to have died nine are still alive but have relapsed, and four teen cannot be traced The report proceeds The outlook for a patient of the industrial classes in whose sputum tubercle bacilli have been demonstrated on at least two occasions is well-nigh hopeless under conditions similar to those that have prevailed in the past. Although much suffering has been relieved and many lives have been prolonged the result achieved as measured by the number of patients cured or restored to full working capacity is small considering the amount of

it behooves us to find out where we have failed and why Ninety per cent of the patients treated in the sanatorium were discharged improved in a greater or lesser degree, but the results were not lasting, and in the great majority of the cases relapse occurred under domiciliary treatment owing to failure to reproduce sanatorium conditions, or anything approaching them, in the home It follows, then, that much of the money expended on sanatorium treatment has been wasted, and this state of affairs will continue until the conditions under which domiciliary treatment is administered are drastically reformed Domiciliary treatment has proved the weakest link in sanatorium benefit, and this is particularly unfortunate, seeing that more than 80 per cent of the treatment granted was given to the patient while living in his own home

PARIS

(From Our Regular Correspondent)

July 16, 1920

Compulsory Physical Education

The senate recently passed an act to organize physical education on a national basis The first article of the act provides for compulsory physical education of children of both sexes, boys over 6 years old until their embodiment in the army or navy, and girls in primary and secondary schools, according to the special regulations governing public education

Medical Theses

At its last session the council of the Paris medical faculty again took up the question of theses Heretofore, each graduate was required to deposit 200 copies of his thesis, this has been reduced to sixty-five, with the object of reducing the expense incident to printing the pamphlets As these copies were intended primarily for exchange with foreign universities, it follows that the exchanges would necessarily be restricted and this would detract considerably from the diffusion of French science abroad and of foreign works in France The council therefore decided that the measure is susceptible of further study, the saving realized by the student being of less importance than the interference with the diffusion of French thought An inquiry among publishers showed, in fact, that the saving amounts to about 40 francs for each printed signature, perhaps 100 or 120 francs on the average thesis costing 500 francs

The Dangers of Neomalthusianism

For some time now, contraceptive apparatus have been sold openly by a large number of druggists and rubber merchants, and it is not an unusual sight to see them displayed in the show windows This deplorable state of affairs moved the Alliance nationale pour l'accroissement de la population française to address a special appeal to all druggists of France, asking them, in the interest of the country, to discontinue the sale of such apparatus In its appeal the Alliance laid stress on the fact that the reduction of the birth rate constituted a very grave danger to France

Unfortunately this is all the more true since at the present time a neomalthusian campaign is under way in certain industrial centers It has gotten so that at Roubaix-Tourcoing a communist syndicate the Union des travailleurs, during the first five days of July distributed more than 40,000 copies of a pamphlet in street cars and at factory gates, even tossing them into the doorways of workmen's houses Although the pamphlet bore the printer's name no legal action has been brought against the authors, printers and distributors For that reason the consortium of the textile industries of Roubaix-Tourcoing, constituted of 312 manufactures employing more than 70 000 workers which since March 1, has been granting a family bonus of 1 franc for each child and a maternity allowance of 200 francs, has protested vigorously against the inaction of public authorities The consortium has expended 25,000 francs per day in family bonus since March 1, and it is certainly regrettable that all these efforts are neutralized by an infamous campaign conducted in broad day

Committee on Social Hygiene

A campaign committee on social hygiene and prophylactic instruction was recently organized for the following purposes (1) the establishment of a bureau of information, literature and publicity on all questions relating to social hygiene, (2) the creation of centers of popular instruction in social hygiene and of normal courses for teachers and special workers, (3) the collection of propaganda material, (4) the formation of regional committees, and (5) the organization of a congress on social hygiene education

BELGIUM

(From Our Regular Correspondent)

July 8, 1920

Federation of International Medical Societies

M Willems has called the attention of the Academy to the fact that Dr F C Simpson of Pittsburgh recently spent several months in Europe with a view to interesting the medical profession of the world in the project conceived by American scholars of reorganizing on a uniform basis all international societies related to the various branches of medicine It is proposed to create a federation of these societies and to establish an international medical press bureau which shall be charged with making known all important discoveries to the medical press of the world, thus assuring rapid diffusion of medical knowledge

A committee of ten, composed of two physicians from each of five countries, Belgium, France, Great Britain, Italy and the United States, has been named and will meet immediately in Paris or London to set the new organization on foot

Belgium, which already has many reasons for feeling devoted to America, cannot but greet with joy this new achievement of a great people American genius has distinguished itself by a happy mixture of realism and idealism and it has wrought some remarkable solutions of the economic and scientific problems which mankind faces

Memorial to Physicians Fallen in the War

The families and friends of physicians who fell on the field of honor gathered, June 10, for the unveiling of a monument commemorating the glorious sacrifice of the fallen heroes The marble tablet bearing the name of each was placed in the hall of the military hospital of Brussels, and before a profoundly affected assembly presided over by the minister of national defense, Dr Wibin extolled the unselfishness of their heroism in impassioned and vibrant terms To those who have gone, he expressed the deep gratitude of the youth of Belgium for the self-sacrifice which made victory possible

Honors to Dr Bainbridge

Dr William Seaman Bainbridge of New York has just been nominated corresponding member of the Academie royale de Belgique Besides his works on cancer, special attention is called to the excellent report on war surgery which he published after a trip to both sides of the front

Venereal Prophylaxis

Although the venereal peril is increasing from day to day in almost all countries, it is impossible to give special attention to all the measures proposed for counteracting the evil In Belgium, venereal diseases constitute a formidable endemic which the war has only increased M Bayet recently maintained before the Academie de medecine that all hope of

effective control through administrative measures should be abandoned In order to be successful a campaign must be undertaken by the medical profession itself The profession should have representation on the Conseil superieur d'hygiene through the colleges and medical societies, it should recommend the candidates for appointment as dispensary directors, and should take an active part in the working of the dispensaries The Conseil superieur d'hygiene should be a sort of Conseil d'Etat, which should work out reforms and forward the recommendations to the administrative officers for detailed enforcement In case of irreconcilable dispute, the question could be submitted to the public through mediation of the Academie de medecine

The academy voted unanimously in favor of a resolution that the study of all questions of prophylaxis and social hygiene and of the necessary measures of execution should henceforth be confided to competent medical authority the academy, Conseil superieur, officers of the government and medical societies, and that the practical enforcement of these measures should be entrusted to the association and general collaboration of all practitioners

MADRID

(From Our Regular Correspondent)

June 12, 1920

Cajal and his New Institution

The government has established the Instituto Cajal It is not an entirely new institution, but the bringing together of several laboratories which operated under the auspices of the Junta de Pensiones para el Extranjero (Foreign Fellowship Board) In fact, the laboratory for biologic investigations (created in 1900 with the Moscow international prize granted to Cajal) is now extended to include sections on general physiology, normal and pathologic histology, neurology, experimental pathology, etc On the unanimous motion of the government, approved by the king, the new center of education will be named Instituto Cajal Cajal, in order to devote all of his time to this institute has resigned as director of the Instituto de Alfonso XIII, which is another state institution devoted to the combating of infectious diseases and the manufacture of biologic products In connection with the creation of the new institute, there has been much talk of Cajal recently, general homage being rendered to his talents, his activities and the many excellent qualities of this man, as talented as he is modest Cajal is as well as ever, is preparing a splendid psychologic histology and exhibits his genius in all the copies of the journal of his laboratory for biologic investigations Cajal, however, is prone to pessimism which occasionally makes him believe, as about two years ago, that he suffered from cerebral arteriosclerosis His words at the time were widely copied in the medical journals, but as a matter of fact and fortunately for science his wonderful brain is not involved at all and his neurons show no signs of senile degeneration

Cajal's pessimism is always instructive and convinces any one who listens to his arguments In Cajal's opinion, as he told me, war has its roots in the innermost part of the human soul 'From the cave man (as shown by the war scenes in Cagul's cave and other representations of the prehistoric man who lived more than a hundred thousand years ago) to the modern human being all men have always considered collective looting and murder honorable and necessary, and have never been at a loss for reasons to explain their aggressions How can it be hoped that man who was always a wild beast will change suddenly his customs and bloody instincts? When I hear that *Homo sapiens* will very soon decide peacefully his quarrels in accordance with the principles of law I am as much amazed as if they told me that tigers will become some day harmless, herbivorous animals" Cajal takes very much to heart the sad spectacle presented by our politicians and repeats Humboldt's phrase that the Spaniards lack political sense In Cajal's opinion he should have added "They are almost completely deprived of the instinct of preservation Cajal however believes in the intellectual future of the race but its disintegrated atomism its wild individualism handicap the patriotic impulses of the few statesmen we have in this country Cajal advises a law according to which no politician could become a minister unless he had spent at least three years in Germany, France England and the United States, learning the difficult science of governing free peoples He would do likewise with the majors and colonels Do you believe," he asked me that we would have lost our colonies if the ministers the generals and the admirals besides knowing political geography, had spent compulsorily two or three years among the Yankees?'

The Medical Strike

The Spanish socialist party nowadays evolutionizing toward syndicalism has its headquarters at the well known Casa del Pueblo, where are planned virtually all the strikes that upset the economic life of this country One of the institutions utilized by the Casa del Pueblo to influence the Madrid workingmen has been the Mutualidad Obrera an economic and beneficial association, one of the chief assets of which is the medical service it offers its members This Casa del Pueblo has in its turn been threatened with a strike by its own physicians who dared to ask an increase in salary This was refused to them The physicians were amply justified in their request as each of them is compelled to care for 300 families and receives a monthly fee of 50 centimos de peseta (10 cents) for each family, that is, 150 pesetas (about $30) The physicians at this time learned their lesson from labor threatened to strike, and have obtained an increase of their fees to 275 pesetas (about $55)

BERLIN

(From Our Regular Correspondent)

June 28, 1920

Socialization of Medical Practice

In order to avoid the evils of kassen practice, which are increased by the brutal demeanor of the officials in the guise of employers, there has lately been an increase in the number of those physicians who without being affiliated with the social democratic party are inclined to vote for so called socialization of medical practice This scheme for "state medicine is part of the Erfurt program of the social democratic party and under its provisions all medical and obstetric attendance and all medicines would be furnished free of direct charge The whole notion of the workings of this scheme is shown in an article by Dr Kollwitz of Berlin in a recent number of the *Deutsche medizinische Wochenschrift* 'In the present transitional period physicians are being asked to decide whether they wish to engage exclusively in private practice or place themselves at the disposal of the public service In the latter event they will not receive fees for individual services or a capitation allowance but a fixed salary They will be obligated to remain in the public service for a stated number of years or until disabled Their period of duty shall generally embrace a certain number of hours corresponding to the normal working day The appointment entails in addition the grant of a disability pension and care of dependents The post of duty will be determined by the preliminary training and residence of the physician, b transfers and changes will be prescribed partly to [illegible] monotony and partly to furnish rel [illegible] at will be given free to all Members of

then no longer constitute a special category of patients, and division and tearing apart of the kassen system (from an economic and business point of view one of the most unsatisfactory works of the past) will be superfluous Since society will furnish medical assistance to everybody, the krankenkassen will disappear entirely or they will function only as auxiliary relief societies The ambulant sick will be treated in public consultation offices, the bedridden will be attended in their homes, and those suffering from serious illness or contagious diseases will be taken to hospitals Consultation offices will be distributed, like the schools and postoffices, throughout the country, depending on the particular needs Physicians will serve at these offices in monthly rotation, and an eight-hour day will be divided into three hours at the office and five hours on house visits or in public health work General practitioners and specialists will be assigned to each office and their services will be available day and night Division of duties within the offices will be made by a committee chosen from the interested physicians The assignment of men to posts in the consultation offices, hospitals, sanatoriums, research laboratories and examination stations will be determined by a council of physicians and finally by the ministry of health" As may readily be conceived, the great majority of physicians recognize that these provisions will bring many disadvantages to physicians and patients alike, and will be in large measure impracticable Because of a desire for professional freedom, physicians are opposing the socialization of medical practice except those belonging to the social democratic party and a few fanatics for liberty

At the meeting of physicians last year, a resolution opposing state domination of medical practice was adopted, in the interest of the patient, the physician and medical science, on the ground that a personal relation of confidence between physician and patient was unconditionally necessary The consistent introduction of the policy of free selection of physicians, unrestricted by officialdom, in the whole kassen practice will assure most perfectly the fulfilment of the most comprehensive missions of medicine Fortunately the national assembly rejected the proposal of an independent social democrat to socialize the practice of medicine and obstetrics and the manufacture and sale of drugs under control of the ministry of health During the debate the minister of the interior declared that he considered socialization of medical practice as inexpedient Meanwhile as a result of the elections of June 6, the social democratic party is excluded from the government and the danger of renewed attempts is temporarily averted

Marriages

HUGH FRANCIS LENA, New London, Conn, to Miss Helen Frances Gartland of Dorchester, Boston June 26

WILLYS MERRITT MONROE Guabita Panama to Miss Edith Marjorie Bates of Cristobal, Panama, July 22

LAWRENCE KRAMER GUNDRUM, Fontanelle Iowa, to Miss Ethel Henshaw Martin of St Louis, June 12

MAX SHAWEKER New York to Miss Mary Kathryn Keplinger of New Philadelphia, Ohio, June 14

HERBERT MAXWELL NASH WYNNE, Minneapolis to Miss Ethel Maxwell of Everett, Mass June 1

ALBERT ERNEST GALLANT, Forest Hill Gardens, L I to Mrs Mary Claire Parsons, June 14

ISOM ALFRED RANKIN, Morning Sun, Iowa, to Miss Dorothy Bemis of Bondurant, Iowa, June 18

JAY CLEVELAND BYERS, Dorchester, Neb, to Miss Linda C Snow of Alexandria Va, June 22

WALKER ELY SWIFT to Miss Dorothea Valentine Abbott both of New York, July 18

EDGAR POE SANDROCK, to Miss Dorothea Gertrude Peters, both of Baltimore, July 22

Deaths

Burton Jay Merrill ⊕ Stillwater, Minn, Bellevue Hospital Medical College, 1881, aged 64, coroner and county physician of Washington County, Minn, professor of materia medica and therapeutics from 1886 to 1888 in the St Paul Medical College, physician to the State Prison since 1889, died, July 16, from heart disease

Johann Franz Dolina, Dayton Ohio, University of Konigsberg Germany, 1889, aged 60, a member of the Ohio State Medical Association, died in the Miami Valley Hospital, Dayton, July 12, from hemorrhage following razor wounds of the throat presumably self-inflicted

Elias Lester, Seneca Falls, N Y, College of Physicians and Surgeons in the City of New York 1863, aged 86, assistant surgeon, U S Army, and brigade surgeon during the Civil War, the oldest member of the Seneca County Medical Society, died, July 18

Truman P French, Chicago, Indiana Medical College Indianapolis, 1878, aged 69, a member of the Illinois State Medical Society, for many years a practitioner of Vermillion County, Ill, died at the home of his son in Springfield, July 13

Eli P Edwards, Paris, Texas, Hospital College of Medicine, Louisville, 1881, aged 69 a member of the State Medical Association of Texas, who was operated on in the Sanitarium of Paris, July 1, died in that institution, July 4

Hugh Sutherland Kinmouth, Asbury Park, N J, College of Physicians and Surgeons in the City of New York, 1870, aged 72, died near Delmar, N J July 21 from the effects of poison believed to have been self-administered

Albert Shunk, Mansfield, Ohio, College of Physicians and Surgeons in the City of New York 1886, aged 57, a member of the Ohio State Medical Association, died, July 14, from a gunshot wound of the head self-inflicted

Felix Barrett, Westbrook, Me, United States Medical College New York, 1883, Medical School of Maine, Brunswick and Portland, 1893, aged 59 a member of the Maine Medical Association, died, April 27

John Joseph Kenny, New York, Columbia University College of Physicians and Surgeons, New York 1915, aged 37, a member of the Medical Society of the State of New York, died in Roosevelt Hospital, July 24

Victor Parsonnet ⊕ Newark, N J, Long Island College Hospital Brooklyn, 1898, aged 49, visiting gynecologist and president of the medical staff of the Beth Israel Hospital, Newark died suddenly, July 20

Frank Beebe ⊕ Johnstown, N Y, Albany N Y Medical College 1881, aged 65, mayor of Johnstown from 1907 to 1909, died at the home of his daughter in Eau Claire, Wis, July 9, from pneumonia

Edward Montrose Smith ⊕ Bridgeport Conn, College of Physicians in the City of New York 1882, aged 60, once president of the Bridgeport Medical Association, died, July 14 from pneumonia

Tinsley V Ware, Springfield Mo (license Missouri State Board of Medical Examiners, 1883), aged 88, for many years a practitioner and druggist of Lebanon, Mo, died, July 16

Charles Frederick Hill, Newark N J, Baltimore Medical College 1908, aged 38 a member of the Medical Society of New Jersey, died in Pequannock N J, July 9, from tuberculosis

Marie Geraldine Langdon, Englewood Cliffs N J, Baltimore University School of Medicine 1904 Woman's Medical College of Pennsylvania, Philadelphia, 1905, aged 51, died, June 21

Rozell McGlathery ⊕ Conklin Colo, Tulane University New Orleans 1908, aged 37 died, July 14 from a gunshot wound believed to have been self-inflicted with suicidal intent

Charles Oscar Cranston, Parsons Kan, Kansas City (Mo) Medical College 1894, aged 51, died in St John's Hospital Joplin Mo, July 18, after a surgical operation

⊕ Indicates Fellow of the American Medical Association

George Frederick Pitts, Warwick, N Y , University of the City of New York, 1877, aged 71, a member of the Medical Society of the State of New York, died, July 22

Walter Samuel Mickler, Lee Fla , Southern Medical College, Atlanta, Ga , 1895, aged 47, died in a hospital in Greensboro N C, July 21, from gastric ulcer

Abraham Huntsinger, Mishawaka, Ind , Bennett College of Eclectic Medicine and Surgery, Chicago, 1877, aged 81, died June 30, from cerebral hemorrhage

Christopher C Rutherford, McDade, Texas, Tulane University, New Orleans 1881, aged 81, died at the home of his son in Giddings, Texas, July 14

Joseph Farley ⊕ Philadelphia, Jefferson Medical College 1886, aged 58, died at his summer home in Atlantic City, July 19, from cerebral hemorrhage

Harry Chester Ewing, Colorado Springs, Colo , University of Colorado, Boulder and Denver, 1911, aged 36, died, April 7, from pulmonary tuberculosis

Harry E Campbell, Pittsburgh, Jefferson Medical College, 1881, aged 60, died in a rooming house in New York, July 25 from cerebral hemorrhage

Charles C Williams, Pittsburgh, Cleveland University of Medicine and Surgery, 1894, aged 48, a veteran of the war with Spain, died July 21

Cornelius W Cramer, Pentwater, Mich , Hahnemann Medical College, Chicago, 1886, for forty-five years a practitioner, died, about July 12

George Albertson Parker ⊕ Southampton, Pa , University of Pennsylvania, Philadelphia, 1875, aged 65, died, July 24, from heart disease

Henderson Hines, Rago, Kan , Cincinnati College of Medicine and Surgery, 1866, aged 89, died, July 15, from cirrhosis of the liver

Horace L Martin, Atlanta, Ga , Medical College of Georgia, Augusta, 1893, aged 54, died at a sanitarium in Atlanta, July 2

Cassius E Belcher, Barnesboro, Pa , Cincinnati College of Medicine and Surgery, 1877, aged 60, died, July 15, from nephritis

Henry Adams Carr, Elmira, N Y , University of the City of New York, 1879, aged 77, died in Utica, N Y, June 25

John Irving Van Wert ⊕ Patton, Pa , Bellevue Hospital Medical College, 1887, aged 55, died in New York, July 25

William T Gaines, Nashville, Tenn , University of Nashville, Tenn, 1882, died in an infirmary in Nashville, July 17

Charles Turner Fisk, Portland Me (license Maine State Board of Registration, Act of 1895), aged 71, died June 11

John M Shutt, Fort Wayne Ind (license, Indiana State Board of Medical Examiners, 1897), aged 70, died, July 17

William L McNeill ⊕ Port Arthur Texas Kentucky School of Medicine, Louisville, 1897, aged 53, died, July 3

Theodore Raymond Parker ⊕ Willimantic Conn , University of the City of New York, 1880, aged 64, died, June 18

Edwin Herbert Russell, Los Angeles Calif Boston University, School of Medicine 1880, aged 63, died, July 16

Eva Harding, Topeka, Kan , Hahnemann Medical College, Chicago, 1882, aged 62, died, July 27 from heart disease

Israel Albert Loveland ⊕ Keene, N H , Dartmouth Medical School, Hanover N H 1875, aged 69, died July 5

William Jacobs, Washington Kan , American Medical College, Eclectic, St Louis, 1876, aged 75, died, July 16

William H Crowley, Chicago, Rush Medical College 1896, aged 53, died at his old home, Potsdam, N Y , July 26

Thomas Norman Pearson, Morrill Me , University of Vermont, Burlington, 1893, aged 55, died May 28

Virgil Thompson, New York New York Homeopathic Medical College, New York, 1862, died June 8

Fred Bellinger Casey, Mohawk N Y , Albany (N Y) Medical College, 1892, aged 53, died July 19

Charles Saraphin Rodier, Manchester N H , Laval University, Montreal, 1887, aged 56, died June 8

George Levi Brown ⊕ Buffalo, Harvard University Medical School, 1870, aged 72, died about July 8

Orville G Hutchinson, Rochester N Y , Eclectic Medical Institute Cincinnati 1891, died, July 9

Correspondence

"CREDULITY AND CURES"

To the Editor —Dr Peterson's article on "Credulity and Cures" (THE JOURNAL Dec 6, 1919) appeals so cleverly to the credulity of the uninformed members of the profession that he is hereby requested to present to the medical profession an unprejudiced scientific discussion of the freudian psychology and the psychanalytic method of treating functional neuroses and psychoses in order that his own interpretations and insight may be fully evaluated, without taking on faith that his personal standing as a psychiatrist and his personal acquaintanceship with Freud and Jung make it impossible for him to be wrong His article is misleading physicians to take a prejudiced attitude toward the treatment of neuroses and psychoses without actually considering why, and this unintelligent resistance is preventing many neurotics and psychopaths from finding a solution for serious conflicts and suffering Dr Peterson's article is not truly assisting the physician to maintain the attitude that he pleads for in his conclusion namely that 'we must try to take a middle path which is broad enough to know that there are great mysteries in our complex organisms and all the sciences that have to do with them and not be too prejudiced to weigh ponder and examine'

He mentions a series of faith" cures, radical surgical operations wild drug cures and eccentric therapeutic methods that have had a more or less popular vogue, and, after doing incalculably more harm than good, have gone to limbo

To this list however in order to balance judgment and not make men perniciously skeptical should be added some illustrations of the long long series of successful clinical anatomic, bacteriologic and physiologic discoveries surgical innovations and therapeutic methods that were once derided and scorned by the suave old fathers of the medical profession

He appeals to the *credulity* of the uninformed physician to accept that he is qualified to attack the work of Freud and Jung because he is personally acquainted with these men has read some of their writings, knows other psychanalysts, and has seen their failures I suppose it is fair politics to ask an uninformed stranger to accept that personal acquaintanceship is sufficient to make one an infallible critic and censor, but when Dr Peterson has their faith in this personal relationship he violates it by making a few brief designing dogmatic assertions which are entirely calculated to bring the theories methods and discoveries of psychanalysis into disrepute without giving the reader the slightest opportunity to judge for himself and examine the errors of Freud and Jung and others He attempts to disparage Freud's discovery of the influence of the wish on human behavior by a prejudiced sketch of how the influence of the wish on the mind of children was discovered Would a reputable surgeon or chemist or psychologist use such methods of criticism of another's work?

This is hardly trying to take a middle path' Dr Peterson surely does not condemn vaccination because it was discovered from a cow Neither would he condemn vaccination and favor laws for its repression because people have died or were mutilated following vaccination Like Dercum Peterson still struggles with the theories and methods which Freud advocated twenty years ago

Is this doleful ignorance or bitter prejudice? Will they deny man the right of self-correction and self-improvement? Have they not changed their own views of psychiatry?

Dr Peterson appeals to the credulity of the medical profession to disregard psychanalysis because it may take several months or even years to treat a case are here no men

diseases, such as tuberculosis, diabetes arteriosclerosis, nephritis and myocarditis, that require expensive treatment and a great outlay of time? Is the physician justified in condemning the use of a therapeutic method on these grounds? He also argues that it is dangerous, causing some to go insane (a very questionable assertion), others to commit suicide, others to get divorces, or become vile, etc Is not surgical practice still burying its thousands, and medical practice its tens of thousands? What physician has not had to bury sad regrets with a patient? It is true that many patients are greatly distressed by the psychanalytic method and so do many patients suffer in order to be cured by other forms of treatment Psychanalysis is not a child's play nor an old man's game Like major surgery, it requires long training, great care and sound, experienced judgment

In surgery and medicine, as in all methods of science and commerce, there will always be crude new methods, a margin of failures and fakers Old methods will always be made to look damnable in the light of newer, while advocates of old conceptions will froth and fume at the work of "faddists" while the "cults" will ridicule the "fossils" and suave moss-backs, even though both may be practicing some excellent as well as ridiculous methods Let us have fairness of criticism and maturity of judgment Who knows what apparently absurd little discovery today will not completely revolutionize medical practice tomorrow? The discoveries of the insignificant little germ and tissue-cell overthrew all the dogmas of the old schools of anatomy physiology, pathology and medical practice So Freud's discovery that the individual has cravings of which he is unconscious (wishes which have a tremendous influence on his thoughts, behavior and health) is forcing the orthodox psychiatry and psychology of the passing decade into disuse

Dr Peterson suggests that if given sufficient encouragement he would advocate the passing of a law prohibiting the psychanalytic method of treating the neuroses and psychoses of young people Why be intolerable of their sufferings from uncontrollable affective cravings? Why like Abraham slay the unhappy son for the glory of God? Why should they not have access to a method of treating maladaptations and fears that has cured hundreds of young men and women and helped them to know themselves? Is it necessary to hew out of mountains great granite slabs and erect in massive letters, so the whole world will be reminded every moment that the most important and most difficult thing in the world is "Know Thyself"

Through the psychanalytic method of studying the insane we have learned that the most potent cause of insanity is *repressed affective cravings,* and this repressive tendency is started early in childhood, not naturally or through the designs of Nature but through the pernicious influence of prudish, purblind fathers and mothers, and dogmatic teachers who are obsessed with sexual phobias

Dr Peterson makes a claim that many psychanalytic case reports show little of the cases and much about the type of mind of the psychanalyst himself This must be accepted There will be quite a rush of untrained physicians to psychanalysis, after failing in other lines of work, who regard tentative guessing and questioning of patients as good practice In every line of endeavor there are fakers and wolves, but—why be like the Prussian officer who destroyed Louvain because one of the citizens committed a crime? Why not "take the middle path" and recognize that we are able to judge much of a man's personality not only by what he writes (as "Credulity and Cures) but also by the manner of his dress, his signature, voice, step, smile, what he reads, the way he operates

If Dr Peterson will give us an unimpassioned, unprejudiced discussion of the new psychopathology and psychanalysis, making the fallacies of reasoning apparent by scientific data and logic, so that the medical profession may judge without having emotions appealed to in a manner that is designed to arouse a biased attitude, then his fairness to science and the affront on the credulity of the medical profession may be redeemed

Dr Peterson ridicules the importance which the "new psychology" places on the emotional value of symbols and dreams, and yet in his article he uses quite a few symbols to express what he *wishes* to say, as for example, "our dreams reflect in a moonlight kind of way the thinking processes of our day"

Ten years' experience with the Freudian psychology and the psychanalytic method in hospitals for mental diseases has demonstrated that psychanalysis has made momentous contributions to knowledge of the nature of man, and that the psychanalytic method is of the utmost value in the treatment of selected cases of nervous and mental diseases

EDWARD J KEMPF, M D, Washington, D C

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

HYCLORITE — DICHLORAMIN T — SURGICAL SOLUTION OF CHLORINATED SODA

To the Editor —1 Please give me some information concerning Hyclorite put out by the General Laboratories Madison Wis as to its antiseptic value and stability 2 Also concerning Abbott's dichloramine T Do these products contain the required amount of chlorin? 3 Also please give me information where I can obtain a chlorin gas to make Dakin's solution

CHARLES T STURGEON M D Los Angeles

ANSWER —1 Hyclorite has been accepted for New and Nonofficial Remedies and reference to the 1920 edition will give the requested information, with regard to the stability of this preparation The description for this product explains that its actions and uses are those of solution of chlorinated soda U S P A general article which precedes this and similar chlorin products contains valuable information about hypochlorites and hypochlorite substitutes

2 Dichloramine-T Abbott is one of the several brands of Dichloramin-T which have been accepted for New and Nonofficial Remedies and which may be depended on to contain the required amount of chlorin

3 New and Nonofficial Remedies describes Chlorine-Soda Ampoules marketed by Johnson and Johnson These are composed of a sealed glass tube containing liquid chlorin and a tube containing sodium carbonate Directions are furnished for preparing surgical solution of chlorinated soda (Dakin's solution)

LITERATURE ON LUNG ABSCESS FOLLOWING TONSILLECTOMY UNDER LOCAL ANESTHESIA AND UNDER GENERAL ANESTHESIA

To the Editor —Will you inform me where I can find some information on the subject of lung abscess following tonsillectomy under local anesthesia also under general anesthesia?

C N C M D Washington D C

ANSWER —The following articles have appeared on this subject

Simpson J R and Nonh H G Report of Two Cases of Lung Abscess Following Tonsillectomy Under Local Anesthesia in Tubercular Subjects *Pennsylvania M J* March 1920

Burger H Lung Abscess after Tonsillectomy *Nederlandsch Tydschr Geneesk* Nov 1 1919 abstr THE JOURNAL Feb 21 1920 p 570

Carr J G Lung Abscess Following Tonsillectomy *Med Clin N Am* July 1919

Clendenning Logan Cause of Abscess of Lung after Tonsillectomy THE JOURNAL, April 3 1920 p 941

Walters R M Cause of Lung Abscess after Tonsillectomy THE JOURNAL April 17 1920 p 1116

Wilkinson Oscar Cause of Abscess of Lung after Tonsillectomy THE JOURNAL April 24 1920 p 1183

Flagg P J Cause of Abscess of Lung after Tonsillectomy THE JOURNAL April 24 1920 p 1183

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA Juneau Sept 7 Sec Dr Harry C De Vighne Juneau
HAWAII Honolulu Sept 6 10 Sec Dr R W Benz 1141 Alakea S Honolulu
ILLINOIS Chicago Sept 20 23 Director Francis W Shepardson State House Springfield
IOWA Des Moines Sept 15 17 Sec Dr Guilford H Sumner Capitol Bldg Des Moines
MASSACHUSETTS Boston Sept 14 16 Sec Dr Walter P Bowers State House Boston
NEW HAMPSHIRE Concord Sept 9 10 Sec Dr Charles Duncan Concord.

Massachusetts May Examination

Dr Walter P Bowers, secretary, Massachusetts Board of Registration in Medicine reports the oral, written and practical examination held at Boston, May 11-13 1920 The examination covered 13 subjects and included 70 questions An average of 75 per cent was required to pass Of the 21 candidates examined 6 passed and 15 including 4 osteopaths, failed The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Boston University	(1919)	76 7
Middlesex College of Medicine and Surgery (1919) 75 1 75 1	(1920)	77
Tufts Medical College	(1919)	77 7
Omaha Medical College	(1896)	75
FAILED		
Chicago College of Medicine and Surgery	(1916)	68
Loyola University	(1919)	72 5
Indiana University School of Medicine	(1917)	69 4
State University of Iowa Coll of Homeo Med	(1915)	63 8
Baltimore Medical College	(1902)	67 1
College of Physicians and Surgeons Boston	(1920)	66 9
Middlesex Coll of Med and Surg (1919) 67 71 7 72 7		
Meharry Medical College	(1913)	73 3
Laval University	(1919)	68 6

New Mexico April Report

Dr R. E McBride, secretary New Mexico State Board of Medical Examiners, reports that 5 candidates were licensed on diploma and 1 candidate was licensed by reciprocity, at the meeting held at Santa Fe April 11-12, 1920 The following colleges were represented

College	Year Grad	Reciprocity with
LICENSED ON DIPLOMA		
George Washington University	(1918)	
Northwestern University	(1909)	
Kansas City Medical College (1891)	(1905)	
Vanderbilt University	(1882)	
LICENSED BY RECIPROCITY		
St Louis Univ School of Med	(1918)	Missouri

Oregon January Examination

Dr Urling C Coe Oregon State Board of Medical Examiners reports the written examination held at Portland, Jan 6-8 1920 The examination covered 16 subjects and included 92 questions An average of 75 per cent was required to pass Of the 39 candidates examined, 22 passed and 17, including 5 osteopaths failed The following colleges were represented

College	Year Grad	Number Licensed
PASSED		
College of Medical Evangelists	(1918)	1
George Washington University	(1919)	1
Chicago College of Med and Surgery (1915)	(1916)	2
College of Phys and Surgs Chicago	(1904)	1
Loyola University	(1917)	1
Northwestern University	(1906)	1
Rush Medical College (1903) (1906)	(1917)	3
Keokuk Medical College	(1895)	1
State University of Iowa College of Medicine	(1901)	1
Johns Hopkins University	(1915)	1
Harvard University	(1893)	1
Washington University	(1911)	1
Bellevue Hospital Med College	(1879)	1
University of Oregon (1916) (1918) (1919 1)		5
University of Vermont	(1889)	1
	Number Failed	
Hahnemann Medical College Chicago	(1896)	1
Northwestern University	(1910)	1
College of Physicians and Surgeons Chicago	(1905)	1
University of Louisville (1907),	(1916)	2
Missouri Medical College	(1895)	1
University Medical College of Kansas City	(191_)	1
Eclectic Medical University Kansas City	(1917)	1
St Louis College of Physicians and Surgeons	(1918)	1
University of Pennsylvania	(1918)	1
University of Tennessee College of Medicine	(1911)	1
Nippon Special Medical School Japan	(1910)	1

Book Notices

THE AMOEBAE LIVING IN MAN A Zoological Monograph By Clifford Dobell M A I R S Assistant Professor of Protistology and Cytology in the Department of Biology Imperial College of Science and Technology London Cloth Price $3 75 1p 155 New York William Wood & Company 1919

In this volume the author sums up his researches on amebas in man and the lower animals He presents the subject more from the standpoint of comparative protozoology than from the medical point of view He has worked over an immense amount of material—10 000 human stools and 150 kittens experimentally infected with *Endameba histolytica* together with much special pathologic material from a variety of intestinal diseases observed chiefly during the war He discusses at considerable length the several varieties of amebas found in man, and also those found in dogs and in monkeys In the genus *Endameba* he includes three varieties *E histolytica L coli* and *L gingivalis* The first he considers the common cause of amebic dysentery and the second a common nonpathogen of the intestinal canal Regarding *L gingivalis* he says "At present therefore there seems to be no good evidence to support the hypothesis that *L gingivalis* attacks the tissues, that it is the cause of pyorrhea or that it is in any way pathogenic" His manner of presenting a subject is not always concise The presentation of data is frequently mingled with paragraphs of discussions of an argumentative nature which at times become tedious Especially does the author criticize Schaudinn stating that his conclusions regarding the intestinal amebas of man were mostly incorrect But he approves of and uses Schaudinn's nomenclature of dysentery amebas (*I histolytica*) and recommends Schaudinn's sublimate alcohol method as the 'best fixative for cysts" He does not approve of the term "Craigia' believing that adequate evidence for the existence of this organism has not been presented At the end there is an excellent bibliography which is extensive but not complete There is also an index After reading this monograph, one is conscious of at least three difficulties confusion regarding identification confusion regarding nomenclature and inadequate knowledge of the life histories of these organisms Dr Dobell deserves credit for at least some degree of progress along these lines

DISEASES OF THE THROAT NOSE AND EAR For Practitioners and Students By W G Porter M B B Sc F R C S Third edition revised under the Editorship of A Logan Turner M D F R C S (Edin) Professor of Laryngology and Rhinology University of Edinburgh Surgeon Edinburgh Eye Ear and Throat Hospital Price $3 Net 1p 300 with 79 illustrations New York William Wood and Company 1919

This is a concisely written volume [illegible] the practitioner and senior student [illegible] sufficient information on the subject to [illegible] tice With this end in view the [illegible] anatomic description except in special [illegible] are not illustrated Major operative [illegible] volume is chiefly devoted to [illegible] treatment so far as the latter [illegible] specialist This method has [illegible] valuable book for the general [illegible] out exceptions its worth [illegible] four sections devoted respectively [illegible] larynx nose and ear [illegible] described followed by [illegible] nosis and treatment [illegible] occurring in these [illegible] used in the treatment [illegible] and the public [illegible]

or near the time of injection of antigen appear variable and uncertain, more so, perhaps, than might be expected from the demonstrations that antibodies appear earlier in the spleen than in the blood, that antigen is fixed by the spleen, and that in the presence of antigenic substances cultures of splenic tissue outside the body may produce antibodies The results of several experiments indicate clearly that after antibody production is well under way, splenectomy has little or no effect on the course of the antibodies in the blood The antibody content of the blood was not diminished markedly by splenectomy and roentgenization at or near the height of the curve The nature of this so-called resistance remains obscure

Irregular Typhoid Strains—Meyer and Neilson describe the laboratory infections in a vaccinated caretaker exposed to laboratory animals shedding living typhoid bacilli and a laboratory worker also immunized, who was regularly working with strains of the *B typhosus* group The last case apparently caused a severe and fatal house contact infection From the blood and urine of two persons, an irregular, atypical organism, and from the stool and urine of a third typical typhoid bacilli were isolated The possible bearing of these observations on the epidemiology, clinical aspect and bacteriology of typhoid fever is discussed, and it is suggested that special attention be paid to the occurrence and the detailed study of irregular typhoid strains in the typhoid vaccinated

Hemophilic Nonaerogenic Paracolon Bacillus—A bacillus isolated from the urine of a case of bilateral infected hydronephrosis is described by Meyer and Hinman The bacillus is apparently a member of the paracolon group of bacteria found in urine and is best designated as hemophilic nonaerogenic paracolon Samples of urine cultured after the patient had been vaccinated with a heat killed, tricresolized bacterial suspension of the original parasitic strain and after a clinical recrudescence demonstrated the same organism which grew on nonhemoglobin mediums and which in every respect corresponded with the saprophytic strains obtained by successive cultivation on artificial mediums

Journal of Medical Research, Boston

March 1920 **41**, No 3

*Skin Lesion in Measles F B Mallory and E M Medlar Boston—p 327
*Type Cell of So Called Dural Endothelioma F B Mallory Boston—p 349
*Regeneration of Smooth Muscle Cells F B Berry Boston—p 365
*Experimental Production of Pneumonia with Influenza Bacillus of Pfeiffer R H Major Rosedale Kan—p 373

Skin Lesions in Measles—The skin lesions in measles are, without much question, of infectious origin and due to the causal agent of the disease The reasons for these points of view are as follows The lesions are focal in character and discrete, not uniformly distributed like the rash in scarlet fever They are scattered irregularly, sometimes singly, often in smaller and larger groups If numerous enough, they may become confluent Small pieces of skin removed during life from thirty-five patients were studied by the authors and the findings are described in detail The endothelial cells lining the capillaries in the earliest lesions often contain from one to four rarely more, minute intensely staining spherical bodies which vary a little in size In the older lesions the bodies are fewer in number and usually more evident at the periphery of the lesion Still later they disappear entirely The nature of these bodies cannot be determined Similar bodies have not been found in the endothelial cells lining the blood vessels in other acute lesions examined for purposes of control It is suggested that they may be the causal agent, possibly a coccus in various stages of digestion Their positive reaction to the Gram stain would favor this view Study of the nasal, pharyngeal, laryngeal and conjunctival secretions, and of the blood in smear preparations, by dark field illumination and by culture on various media, failed to show any micro-organisms which seemed to bear any etiologic relation to the disease

Dural Endothelioma is a Fibroblastoma—The result of an examination of perfectly typical specimen of a so-called dural endothelioma leads Mallory to suggest that the dural endothelioma, so called, is in reality some form of fibroblastoma The phosphotungstic acid hematoxylin stain showed the real nature of the neoplasm Each cell was surrounded by numerous fine fibroglia fibrils, without question produced by the tumor cells They were better developed in those places where growth was less rapid, but they were everywhere present and were more prominent than the collagen fibrils The production of fibroglia and collagen fibrils is the distinguishing characteristic of the type cell known as the fibroblast The histogenesis of the tumor is discussed

Regeneration of Smooth Muscle—The material for Berry's study was a uterus, into the wall of which a curet had been thrust four days previously Unquestionable regeneration of the smooth muscle was noted Experimental studies made on animals gave the same results Berry considers it doubtful if the condition seen in hypertrophic stenosis of the stomach and in Hirschsprung's disease can be ascribed entirely to simple hypertrophy It would appear, rather, that there must also be some hyperplasia, though in what manner is not clear

Bacillus Influenzae and Pneumonia—The results of Major's experiments indicate that the invasive powers of *B influenzae* are limited When the organisms are injected intravenously the effects produced are to be explained by a toxic action, rather than any direct bacterial action produced by multiplication and spread through the blood stream In no cases were the bacilli recovered from the blood cultures in animals which had been injected intravenously with influenza bacilli Introduction of *B influenzae* into the trachea was successful, in producing bronchopneumonia In these cases also, the invasive properties of the organisms were apparently limited, as the bronchopneumonic patches were small, few in number and confined to the hilus of the lungs The location of these areas also suggested a local direct action of the masses of bacteria, with but little extension to other portions of the lungs A preliminary irritation of the respiratory tract with chlorin gas permitted an extensive invasion with influenza bacilli injected intravenously or intratracheally The pathologic changes produced in the lungs were striking and intense in degree, and resembled the lungs in fatal cases of human influenza In the majority of these cases influenza bacilli were grown from the lungs in pure culture

Medical Record, New York

July 17, 1920 **98**, No 3

Tonsil Infections S R Salzman, Toledo O—p 85
Obesity H C Clapp Boston—p 89
*Bacteriologic Study of Respiratory Infections and Respiratory Contacts as Encountered in France H R Spencer Baltimore—p 94
*Treatment of Acute Polyarthritis S W Boorstein New York—p 96
Value of Immunizing Doses Influenza Vaccine in Prophylaxis and Specific Treatment of Influenza W E Fitch New York—p 100
*Blood in Influenza B Lemchen Chicago—p 102
Cancer of Omentum J N Study Cambridge City Ind—p 103

Pathology and Bacteriology of Pneumonia—Of the fatal cases (seventy-five) of pneumonia studied by Spencer postmortem, 91 9 per cent were bronchopneumonias The lesions were most frequently bilateral and involvement was most often noted in all of the lobes of both lungs Of the lobes involved, the lesions were commonly found in the dependent portions Pleurisy was the most common complication being noted in 72 per cent of cases The pneumococcus *Staphylococcus aureus Streptococcus hemolyticus* and Pfeiffer's bacillus were most frequently noted While in both the fatal cases of pneumonia and in the contacts Type IV pneumococcus predominated, the more virulent Types I, II and III were noted more frequently in the pneumonia cases than in the contacts The number of carriers among the contacts was high, and, as might be expected, the incidence of carriers in the medical wards was greater than in the surgical ward Pfeiffer's bacillus was encountered as often among the carriers as in the fatal cases of pneumonia

Medical Treatment of Acute Polyarthritis—In the medical treatment of acute polyarthritis or what has been termed arthritis deformans, Boorstein urges that all forms of salicylates even acetylsalicylic acid, should be avoided They upset

the digestion and make the condition worse Only those medicaments aimed to promote digestion proper bowel activity, proper circulation, and proper character of the blood should be used It is, therefore, advisable to give strychnin, arsenic, iron preparations, and phosphates The laxative desired can easily be added to these In chronic cases, cod liver oil can be added During the acute or subacute stage, hypodermic injections of sodium cacodylate, given every four or five days in from ¾ to 1¼ grain doses have been found of great help in raising the resistance power Tincture of gelsemium, 5 minims may be used to relieve temporary severe pain If intestinal putrefaction is present, Boorstein uses guaiacol carbonate, 5 grains three times daily None of the lithium or radium waters glandular extracts and vaccines were found to have any value

Blood in Influenza—Leukopenia, great diminution of blood platelets with an increase of the coagulability of the blood were the notable findings made by Lemchen in his series of cases

Minnesota Medicine, St Paul

July 1920 3 No 7

Treatment of Second Stage of Labor Prevention of Injury to Child and to Pelvic Floor J B DeLee Chicago—p 317
Surgical Treatment of Bunions C H Mayo Rochester Minn—p 326
Tumors of Great Omentum A L McDonald Duluth—p 331
War Wounds of Major Joints A A Law Minneapolis—p 337
Modified Inguinal Hernia Technic G Earl St Paul—p 342
Surgical Shock S C Plummer Chicago—p 345

New Jersey Medical Society Journal, Orange

July 1920 17 No 7

The Doctor G K Dickinson Jersey City—p 217
The State Journal H Taylor Fort Worth Texas—p 221
Gallbladder Disease J W Martindale Camden—p 226
Errors in Gynecologic Diagnosis and Practice F C Holden New York—p 229
Diagnosing Incipient Pulmonary Tuberculosis C I Silk Perth Amboy—p 231
Good Fellowship J M Rector Jersey City—p 233
*Primary Sarcoma of Appendix H I Goldstein Camden—p 234

Primary Sarcoma of Appendix—Goldstein's patient female, aged 25 years, had several attacks of appendicitis The appendix was eventually removed In its wall was a mass which proved to be a lymphosarcoma Goldstein claims that only sixteen cases of primary sarcoma of the appendix are recorded in the entire literature of the world All the cases showed symptoms resembling attacks of acute or recurrent appendicitis

eight hours and in one in three there was relief after the second dose As a rule, the relief is immediate and complete No undesirable results were noted A child 12 months old age was given 20 minims with no evidence of irritation or other disturbance.

Ohio State Medical Journal, Columbus, Ohio

July 1 1920 16 No 7

Dietetics of Nephritis S R Salzman Toledo—p 485
Problem of Acidosis in Relation to Disease W W Beauchamp Lima—p 488
*Infections of Uterus and Cervix Treatment F I Shroyer Dayton—p 495
Gonorrheal Inflammations in Women E H Chapin Columbus—p 498
Simple Goiter, a Public Health Problem C P McCord and R C Walker Cincinnati—p 501
*Pulmonary Tuberculosis as Sequel of Influenza S A. Douglass and W P Brown Mt Vernon—p 506
Medical Economics J A Duncan Toledo—p 510
*Effect of Ether on Experimental Tubercle Bacillus Infections J B Rogers Cincinnati—p 509
Epidemic of Influenza at Delaware Girls Industrial Home G H Transeau Columbus—p 512
Syphilis and Feeblemindedness in Alabama State Industrial Schools T H Haines, Jackson Miss and W D Partlow Tuscaloosa Ala—p 515

Infections of Uterus and Cervix—Shroyer claims that 60 per cent of all married women and 30 per cent of all unmarried women have infections of the genital tract These infections are almost invariably located in the cervical endometrium The endometrium of the body of the uterus is practically immune to infection Lacerations of the cervix seldom produce uterine or pelvic symptoms It is the presence of infection in the lacerations that causes disease Among the more frequent germs that cause chronic endocervicitis are the gonococcus the streptococcus the staphylococcus and the colon bacillus Infection of the cervix in nulliparous women is frequent, although it is not at all limited to those who have had sexual intercourse nor are these infections always due to the gonococcus, but the mentioned bacteria any one or several may be the causative factor Properly directed surgical interference offers at present the only method of cure The cervical mucosa must be completely enucleated, care being taken not to destroy the muscle for if the muscle is destroyed during future pregnancies the function of the canal will be lacking

Influenza and Tuberculosis—The records of the Ohio State Sanatorium show that epidemic influenza has had a decided etiologic relation to tuberculosis Forty per cent of the tuberculous patients admitted to the [illegible] 1919

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

July 3 1920, 2, No 3105

*Universities in Medical Research and Practice T C Allbutt—p 1
*Place of Preliminary Science in Medical Curriculum G Newman—p 8
Course of Study in Science for Medical Students Biology S J Hickson—p 12
Id Anatomy A Keith—p 15
Id Physics E Rutherford p 16
Id Relation of Preliminary Science Teaching to Pathology J L Smith—p 17
Id Chemistry A Smithells—p 19

Universities in Medical Research—In his presidential address before the British Medical Association Allbutt states that the universities, ancient and modern, from Alexandria to Edinburgh, have made the professions Universities have fostered research, and maintained standards For each student the university stands for something larger than the field of a particular calling for a more comprehensive design Narrow "specialization" is found in medicine, as in other arts, among people of narrow culture Specializing is prone to be quackish Education must therefore from the first be an introduction to life, not forgetting that some study is a part of life In medicine, Allbutt says, the curriculum may well be called a race! The enlargement of knowledge and means implies more and more instruction, but the limits of the human mind are not indefinitely extensible Some casement may be had however by simplifying our studies, by teaching our teachers, by recognizing two curriculums—one of the diploma and another of the university, by postponing some studies till after graduation The diploma course must play up to outside examiners Speaking of teachers Allbutt says that almost none of them has been taught to teach, and but few are in a position to compare the methods of others with their own Short revision or "rubbing up" courses at subsequent dates, as, for instance, of physics and chemistry in the pathology period are advocated The theses and acts for M B and M D at Cambridge are held to be invaluable to the young graduate The debt of other sciences to medicine, research, comparative pathology, psychotherapy, general practice and preventive medicine and clinical practice are subjects which are also discussed by Allbutt

Needed Reforms in Medical Education—The main reforms needed in the medical curriculum in Newman's opinion are four 1 A lightening of the curriculum at both ends, in other words, fuller preparation in science before entrance to the medical school, and a postponement of instruction in certain specialities and in general practice to the postgraduate period in order to provide continued education of the qualified man—teaching which requires organization on the basis of professoriate, hospital, laboratory and clinical experience 2 A fuller study of the sciences preliminary to medicine and a nearer application of these subjects to clinical work Above all, there is great need of biology (anatomy and physiology) Its principles are the answer to many of our questionings It is the fundamental theme 3 Development of clinical teaching of university standard, particularly in relation to the beginnings of disease (the child and the outpatient), the science of prevention, the closed integration of various forms of clinical practice and of clinical with intermediate study, concentration on the protean diseases of tuberculosis, venereal malaria, malignant disease, and an understanding of the social side of therapeutics (environment, diet, occupation, and the use of physical agents), as well as the social aspects of disease 4 There is need of further state aid, though with a minimum of state control To provide a satisfactory medical education (*a*) we need more teachers better teachers, and better paid teachers, (*b*) we need clinical units, (*c*) we need improved laboratory accommodation and better equipment, (*d*) we also need an extension of hospital and clinic facilities for teaching The education of the medical man is no longer a proprietary or merely professional interest It is of national concern—for the health of the people is the principal asset of the state

China Medical Journal, Shanghai

May, 1920 34, No 3

Thrombo Angiitis Obliterans in China G D Whyter—p 219
Uniform System of Eye Tests H J Howard—p 226
Fractures of Femur Diagnosis and Treatment J C McCracker—p 230
Tuberculosis Present Status of Tuberculin Treatment W H Venable—p 236
*Asiatic Cholera Study of One Hundred Cases L H Braafladt—p 243
Cholera in Paotingfu 1919 J H Wylie—p 252
Cholera in Soochow 1919 J A Snell—p 253
Abscess of Liver A I Ludlow—p 258
*Exstrophy of Bladder Implantation of Ureters into Rectum A J Ludlow—p 262
Gangosa in South China Report of Two Cases N Bercovitz—p 263
Influenza Bacillus in Paranasal Sinus Infections S J Crowe and W S T Neville—p 264
*Nutritive Value of Soy Bean Products W H Adolph and P C Kiang—p 268

Asiatic Cholera—On the basis of Braafladt's study, it would seem that (1) persons over 50 years of age contracting cholera have only a very small chance of recovering, even though they receive treatment, (2) that cholera is a more severe disease in women than in men, (3) that the prognosis is very good if proper treatment is commenced during the first day of the illness, (4) that hypertonic salt solution is the best form of treatment for those in severe collapse, but that it is harmful to those who have not yet developed many of the secondary symptoms, (5) that kaolin is the remedy of choice if the patient does not come under treatment too late

Exstrophy of Bladder, Implanting Ureters Into Rectum—A boy, aged 10 years, had a congenital exstrophy of the bladder The anterior wall of the bladder was absent Both ureters could be seen Each ureter, together with a rosette of mucous membrane, was stripped back for a distance of 2 inches The remainder of the bladder was dissected away The peritoneal cavity was not opened during the procedure Forceps were inserted into the rectum and on being passed through the rectal wall the ends of the ureters were seized and implanted into the two separate openings The day following the operation there was leakage from above The patient suffered considerable shock and died on the ninth day after operation

Soy Bean—The history and uses of the soy bean and its products in China are reviewed by Adolph and Kiang and the important relationship indicated which these food products bear to the Chinese dietary Soy bean curd is rich in protein, and contains those mineral constituents which are essential for growth Analyses are given of bean curd, bean milk, and the by-products obtained in their manufacture

Indian Medical Gazette, Calcutta

June 1920, 55, No 6

Standard Diets J A Shorten—p 201
Typhus and Typhus Like Fevers in Birjand, East Persia A S Fry—p 204
Outbreak of Relapsing Fever in Turkey in 1918 C Newcomb—p 208
Influenza J H McDonald—p 217
Improvised Triple Bladed Bamboo Gastro Enterostomy Clamps K Hysain—p 219
*Epithelioma of Upper Lip in Boy of Fourteen L P Stephen—p 220
Case of Cystic Kidney A Viswalingam—p 220

Epithelioma of Lip in a Young Boy—In Stephen's case the tumor was first noticed when the boy was 12 years old It was removed by operation and a recurrence took place three months after On admission to the hospital, in February, 1920 the tumor involved the right upper lip, extended beyond the middle line to the left and involved also the right angle of the mouth and a part of the lower lip On the right cheek adjacent to the principal tumor were several secondary nodules, which were raised and warty in appearance, but were not ulcerating The submaxillary and submental glands on both sides were enlarged and hard but were not adherent to the jaw The microscopic diagnosis was epithelioma

Journal of Tropical Medicine and Hygiene, London

July 1 1920 23, No 13

Treatment of Bilharziasis with Antimony J E R McDonagh—p 165
Bilharziasis Sterilization of Ova During Course of Cure by Antimony (Tartarate) J B Christopherson—p 165

Lancet, London

July 10 1920 2, No 5054

*Relation of Preliminary Science Teaching to Pathology J L Smith —p 55
Medical Experiences in Macedonia and Caucasus A G Phear —p 56
*Physical Element in Psychoneuroses J S Bury —p 66
*Influence of Suggestion on Body Temperature J A Hadeld —p 68
*Suggestions for Mass Treatment of Hookworm Infection S T Darling —p 69
*Two Cases of Paralysis Agitans Occurring Before Thirtieth Year E D Atkinson and C W Drought —p 72
*Central Pneumonia in a Child of Two H O Gunewardene —p 73

Shortcomings of Medical Curriculum.—Smith holds that the present curriculum is wasteful of the students' time because it gives what may be called a general introduction to the sciences, but leaves it to the later teachers or the students themselves to apply the principles and methods of these sciences in the various branches of medicine, whereas a continuity of teaching would concentrate intellectual effort and would thereby attain with much more certainty the standard of work which the curriculum is designed to reach Furthermore, the student of medicine should be trained in criticism, and for this all important part of his training the earlier sciences must assume a considerable part of the responsibility To be a good practitioner of medicine requires that the doctor must possess not only technical knowledge and skill, but also a broad sympathetic, tolerant conception of life To secure this nothing could be better than critical reflection on the fundamental conceptions by which the phenomena of life are interpreted

Psychoneurosis.—Bury regards it as likely that molecular disturbances of the nervous system and altered blood states largely account for the long duration of many cases of psychoneurosis and for the great tendency for symptoms to relapse on the slightest provocation whether that be undue exertion, loud sudden noises or family or business anxieties In the most common type of cases he believes that better results will be attained by fresh air, sunlight cheerful surroundings, and light work, than by continuous searching for a hidden mental conflict

Influence of Suggestion on Body Temperature.—Hadfield cites a case in which there was a very remarkable susceptibility on the part of the patient to suggestions of heat and cold, which was not purely subjective, but produced a rise and fall of temperature as measured by the thermometer

Treatment of Hookworm Infection.—The work of the Malaya board is reviewed by Darling It is recommended that communities in which the adults have an average of fifty or less worms do not urgently require treatment while those with more than fifty worms should be treated In carrying out treatment the two-treatment plan may be pursued, microscopists being dispensed with Every person in the group, excepting very young children, should be treated Persons ill with chronic nervous diseases may be treated with thymol or other vermicide Pregnancy and severe anemia are not contraindications to the administration of chenopodium The drug and dosage is chenopodium 1 5 c c, given in single or broken doses in hard gelatin capsules The preliminary purge before medication may be omitted but in this case the evening meal should be light and food then interdicted until after the postvermicidal purge, which may be given two to three hours after the exhibition of the chenopodium The postvermicidal purgation should be very thorough, for it is extremely important that the chenopodium being a neurotoxic drug with cumulative powers, should be as thoroughly expelled as the worms, and at the earliest possible moment after the drug has accomplished its purpose on the worms If permanent results are to be achieved prophylaxis as well as treatment of infection must be considered

Paralysis Agitans Before Thirty.—The cases cited by Atkinson and Drought are of interest not only on account of the unusually early age (30) but because both patients were soldiers in whom true paralysis agitans is very rarely seen

Central Pneumonia in Child.—The unusual features of Gunewardene's case are (1) that the crisis did not occur till the fourteenth day, (2) that the pneumonia was of the central variety and the physical signs of consolidation did not appear till the ninth day and (3) that the temperature was maintained at two levels during the course of the illness for about nine days between 103 5 and 104 5 F and for five days between 102 and 103 F the fall to the lower range suggests the crisis following the inflammation of the area of lung primarily involved masked by the fever due to the subsequent involvement of another area there is also apparent the so-called precritical rise before the arrested crisis The real crisis was a protracted one

Annales de Medecine, Paris

1920 ~ No 4

*Primary Typhoid or Paratyphoid Phlebitis G Etienne —p 240
Nosography of Human Sero Anaphylaxis Pehu and Durand —p 2 5
Phlebitis with Pulmonary Tuberculosis Halbron and Paraf —p 265
*Elimination of Hippuric Acid P L Violle —p 272
*Role of Fats in Nutrition F Maignon —p 280
Present Status of the Abderhalden Reaction Vitry —p 301

Primary Typhoid Phlebitis.—In the first of Etienne's three cases pain in the ankle was the first positive symptom after eight days of a slightly febrile temperature Phlebitis developed and at the sixth day the paratyphoid A bacillus was cultivated from the blood The phlebitis involved the femoral vein on both sides in turn the temperature showing waves of acute rises By the third month the blood was sterile but there was still some effusion in one knee six months after the first symptoms In the second case the phlebitis developed the third day after the sudden onset of intense headache and malaise The phlebitis assumed the form of phlegmasia alba dolens and involved both legs The subacute disease progressed with the picture of general septicemia with sero agglutination of typhoid bacilli but no signs of actual typhoid fever the man of 56 dying in a little less than a month after the first symptoms In the third case the phlebitis was the first sign of pathologic conditions Then the temperature rose and the phlebitis spread to the other leg with subjaundice the low fever dropping by lysis the third month The serum agglutinated the typhoid bacillus at 1 80 and the paratyphoid bacilli at 1 40 and 1 30 Etienne does not know of any analogous cases on record

Elimination of Hippuric Acid.—Violle shows that the amount of hippuric acid eliminated varies with the diet and the state of the kidneys When the latter are diseased very little hippuric acid is eliminated hence systematic examination of the hippuric acid output from time to time on a given diet including green vegetables and fruits to supply the benzoic acid from which the hippuric acid is formed affords insight into the functional capacity of the latter

Rôle of Fats in Nutrition.—Maignon shows how new facts recently learned have thrown light on the fats as potent modifiers of nutrition in addition to their role as food His personal research has apparently demonstrated that fats do not serve in the production of glycogen in mammals, hence their usefulness in diabetes But they aid in the utilization of the proteins in the food reducing the toxicity and increasing the nutritional value The practical lesson from this is that fats are needed medicinally in all disturbances of nitrogen metabolism and to aid the protein synthesis in growing children He explains the reasons why with menace of coma in diabetes the rational treatment is to give fats in the place of most of the carbohydrates of the diet, the protein in the diet should be reduced to the maintenance minimum The fats should be in an assimilable form such as emulsified and partially saponified oil With this treatment none of his diabetic patients have developed coma although some of them were very grave cases of lean diabetes with intense glycosuria and acetonuria and extreme nitrogen denutrition The same treatment applies also to chronic autointoxication from defective utilization of proteins as in eczema and rheumatismal conditions He has obtained positive results in some dogs with eczema Two conditions are indispensable he reiterates namely that the fats must be given not as a supplement but in place of other foods so that the organism will be obliged to utilize them and not store them up as adipose tissue reserves This can be kept under control by repeated weighing The other condition [illegible] must be kept acid with sodium bicarbonate to overcome the acidity of the urine and hypoalkalinity of the blood he ascribes the cause of aceto[illegible]

Bulletin de l'Academie de Medecine, Paris

June 1, 1920 **83**, No 22

*Convulsions Cured by Operations P Bazy —p 501
Potassm Tartroboras in Epilepsy P Marie and others —p 504
Reduction of Contagious Period by Milne Method G H Lemoine and Favre —p 515

Tendency to Convulsions Arrested by Operation—Bazy reports two cases in which an operation for undescended testicle, with attacks of pain and convulsions, put an end to the pains and convulsions, and there has been no recurrence during the one and fifteen years since In another case an operation for appendicitis arrested recurring convulsions The connection here was evidently indirect, as also in a case in which gastro-intestinal disturbances in a young man were cured by a change from an excessive meat to a more vegetable diet, and there were no more of the convulsions to which he had been subject

Bulletin Medical, Paris

April 21 1920 **34**, No 22

Restoration of Function After Concussion of Spinal Cord A Barbe —p 372
Tuberculosis in the Gassed F Dumarest —p 374

June 5 1920 **34**, No 29

Secondary Endocarditis with Heart Disease P Ribierre —p 513

June 12 1920 **34** No 30

Centers for Infant Welfare Work H Mery —p 531
*Treatment of Jaundice P E Weil —p 533
Gastro Intestinal Disturbance in Children of Rhinopharyngeal Origin A Malherbe —p 535

Sugar and Hexamethylenamin in Jaundice—Weil gives systematically daily by the drop method by the rectum 15 gm of hexamethylenamin in a solution of sugar 45 gm to 1 liter of boiled water in all kinds of acute infections except dysentery He applies it as a daily routine measure from the start All that we know, he says, of liver physiology supports this treatment theoretically and experience is confirming it in practice Sometimes he adds a little epinephrin This treatment is more active than infusion by the vein or subcutaneously of the sugar solution It stimulates the liver and kidneys and induces intense diuresis, while the sugar promotes production of glycogen and elimination of nitrogenous waste, and starts a more profuse flow of bile He uses sugar instead of glucose as more readily available, and is not certain whether the hexamethylenamin might not be dispensed with This treatment may transform conditions with jaundice from gallstones so that operative measures may become unnecessary It fails of course when the jaundice is the result of cirrhosis or neoplasms

Bulletins de la Société Médicale des Hôpitaux, Paris

May 28 1920 **43**, No 19

*Spirochaeta Pallida in Aortic Aneurysms Y Manouelian —p 742
Multiple Relapses of Diphtheric Sore Throat L Boidin —p 747
Dwarfmute Androgynoid Laignel Lavastine and Gouriou —p 749
Heredosyphilitic Gynandroid Laignel Lavastine and Boutet —p 754
Lethargic Encephalitis Dupouy —p 759
Spirochaeta Pallida in Semen M Pinard and Hoch —p 762

Spirochetes in Aneurysm of the Aorta—Manouelian found *Spirochaeta pallida* in three or four cases of aneurysm of the thoracic or abdominal aorta The spirochetes seemed to be clustered in foci

Journal de Chirurgie, Paris

February 1920 **15**, No 6

Muscle Flaps to Fill up Bone Cavities R Gregoire —p 593
Tendon Plastics for Radial Paralysis R Massart —p 601
Access to Foreign Bodies at Base of Brain and in the Sphenomaxillary Fossa Bellin and Vernet —p 616
Extraction Through Appendix of Pin in Cecum L Prat —p 624

Journal de Medecine de Bordeaux

June 10 1920, **91**, No 11

Protection of Infants Against Alcohol Chambrelent —p 287
Nontoxicity of Bismuth Subnitrate L Barthe —p 293
*Access to Sella Turcica Lafite Dupont and Charbonnel —p 294

Access to Sella Turcica.—This illustrated article discusses the topographical relations between the sella turcica and the sphenoidal sinus There is wide variation in different cases but one point seems to be established, namely, that the sella is always on the median line in relation to the transverse axis of the skull Its position in relation to the anterior-posterior axis of the skull may vary

Journal d'Urologie, Paris

1920 **9**, No 1

*Indications for and against Nephrectomy F Legueu —p 1
*Chronic Disease of Seminal Vesicles G Marion —p 11
The Oscillometer as Aid in Urologic Surgery G Jeanneney —p 19
New Case of Spontaneous Rupture of Renal Artery Saint Cene —p 25
*Paresis of Bladder Cured by Borated Glycerin Corbineau —p 31

Indications for and Against Nephrectomy—Legueu relates that thirteen of his 1,008 nephrectomies before 1920 are too recent for decision as to the outcome Of the 437 others since 1915, in 250 the nephrectomy was done on the findings with catheterization of the ureters, and in 187 on the findings of the Ambard ureosecretory index With the latter below 0 100 the mortality was 3 6 per cent , above 0 100, the mortality was 10 per cent With catheterization alone, the mortality was 3 20 per cent His experience all speaks in favor of the Ambard index as being a reliable guide alone, especially when it is below 0 100 The higher the constant the greater the risk The risk is highest when the nephrectomized kidney has been doing part of the work. When the remaining kidney has been doing all the work, the removal of the useless kidney does not affect the total output With a constant below 0 100 the disease was invariably restricted to one side in his experience But the constant does not tell which side, for this, catheterization may be necessary unless the diseased kidney can be located otherwise

Vesiculitis with Prostate Disease—In Marion's three cases the dysuria of prostatic origin was accompanied by inflammatory processes in the seminal vesicles, and in each case the prostate was the seat of a cancer In one, the prostate seemed to be merely smoothly enlarged except that the seminal vesicles could be palpated, tender and dough This should suggest the possibility of malignant disease unless there is evidence of ordinary chronic prostatitis The vesicles in each case were knobby and dilated as if the outlet to their secretions had been blocked by the neoplasm They were the source probably of the violent pains experienced, and the removal of the vesicles with the prostate did not seem to render the prognosis graver

Borated Glycerin in Paresis of the Bladder—Corbineau reports two cases which sustain the general impression that boric acid has a stimulating action on the muscle fibers of the bladder He injected it without first emptying the bladder, injecting 30 c c directly into the meatus without a catheter This small amount was enough in both cases for the patient to regain functional control of the bladder in fifteen or thirty minutes He used a 10 per cent solution of the boric acid

Lyon Medical

April 25 1920 **129**, No **8**

*Vaginal Cystocele H Violet —p 341
*Nephritis After Pneumonia A Giuliani —p 347
War Dyspepsia of War Prisoners in Germany A Mollière —p 374

Vaginal Cystocele—Violet relates that the outcome six to ten years after his operation for prolapse of the bladder has been perfect to date in his twenty cases Through a median incision in the roof of the vagina the bladder and muscles are loosened up and pushed back and the uterus—which is usually dragged down also by the cystocele—is freed He then sutures the fascia together to make a solid floor for the bladder, taking the first stitch in the uterus isthmus Four stitches are usually enough His patients were mostly elderly women, others he tided along with pessaries and encouragement until they were old enough for the operation to be advisable

Bilateral Acute Nephritis After Pneumonia—Giuliani reports the prompt recovery of a young man after decapsulation of both kidneys, the seat of multiple miliary abscesses developing after a week of pneumonia

Medecine, Paris

June 1920 1 No 9

*Recent Acquisitions in Electroradiology A Zimmern—p 517
High Frequency Currents in Therapeutics D Arsonval—p 526
The Condenser to Simplify Electrodiagnosis Cluzet—p 529
*Roentgen Ray Treatment of Pituitary Tumors A Beclere—p 533
Orthodiagraphic Control of Aortitis Vaquez and Bordet—p 536
Curetting plus Roentgen Ray for Skin Epitheliomas J Belot—p 540
*Roentgen Ray Treatment of Exophthalmic Goiter P Cottenot—p 542
Radium Therapy of Cancer of Uterine Cervix S Fabre—p 546
*Carbon Dioxid Snow in Skin Disease L Lortat Jacob—p 552

Recent Acquisitions in Electroradiology—Zimmern cites with approval Renon's appeal for roentgen-ray examination twice a year of persons with disease of the respiratory apparatus, to follow the evolution of their disease by keeping a radiologic record He says that Rist's assertion that a normal lung gives a normal roentgen-ray picture has been proved too absolute by experiences with tubercle bacilli in the sputum when the roentgen-ray picture was quite normal Mantoux has also demonstrated that a necrosed scrap of lung may not cast any shadow Zimmern himself regards as of real value only the positive signs The pneumoperitoneum represents progress, he ascribes the priority to Killing in 1902, and says that to date no mishaps have been reported with it He adds 'The Americans introduced into France during the war high tension apparatus to use with the Coolidge tube as in industrial electricity Schearer in 1917 had pointed out the possible dangers from this and the death of the Paris radiologist, Dr Jaugeas sadly confirmed the justness of his warning The Societe de Radiologie medicale de France has now taken up the question of means for protecting the radiologist and the subject against the high tension circuit and numerous methods have been proposed But there is only one that is absolutely effectual That is, to have all the high tension apparatus in a cage on the ground the opening of the cage automatically breaking the circuit'

Roentgen-Ray Treatment of Pituitary Tumors—Beclere insists that in the constantly widening sphere of radiotherapy, the treatment of pituitary tumors with the roentgen rays is one of the most valuable acquisitions With it he has succeeded in curing the headache vertigo, nausea and vomiting, vision is improved more the earlier the treatment is begun and the changes in the bones are arrested These results have persisted for over six years to date in one case for eleven years One girl of 16 with exaggerated growth, obesity and genital infantilism with enlargement of the sella turcica and signs of intracranial pressure and impairment of vision was so improved by the roentgen-ray exposures that the obesity subsided, and ovarian functioning and the secondary sexual characters developed normally thereafter He exposes different fields on the skull not through the mouth

Roentgen-Ray Treatment of Exophthalmic Goiter—Cottenot says that since he has been using large doses with thick filters, he has been obtaining very fine results in the typical cases with the complete set of symptoms The nervous and heart symptoms are those which show the greatest improvement the tremor subsiding with the restlessness The goiter itself and the exophthalmos are modified least and last The functional disturbances thus are improved or cured, but the objective are more tenacious

Carbon Dioxid Snow in Treatment of Skin Diseases—Lortat-Jacob reviews the experiences in different countries with this cryotherapy or cryocauterization as he calls it showing its success in many forms of dermatoses its absolute harmlessness and its efficacy in many cases refractory to all other measures

Paris Medical

June 5 1920 10 No 23

*Infectious Diseases in 1920 C Dopter—p 449
Clinical Diagnosis of Typhus J Rieux—p 461
The Influenza Virus R Dujarric de la Riviere—p 466
Atypical Bacilli in Bacillary Dysentery J Dumas—p 470
*Spinal Fluid in Lethargic Encephalitis R Benard—p 474

Infectious Diseases in 1920—Dopter reviews the field of infectious diseases describing the most important acquisitions gained during the last five years Among them is the practice of injecting meningococcus antiserum directly into the ventricle at the first suspicion of ependymitis Sicard and his co-workers have even rinsed out the meningeal cavities by a kind of spine-ventricle lavage Boidin Florand and Merv have each reported excellent results from bacteriotherapy associated or not with an abscess of fixation in cases refractory to serotherapy as also Colard Sergent and Bordet with microbian injections by the vein He says of the agglutination of *Proteus* X in typhus that every normal serum contains traces of agglutinins for *Proteus* but the serum of typhus patients contains something that reenforces the normal agglutinins and thus ensures the typical reaction It occurs only in typhus although the proteus certainly has *nothing to do with the causation of typhus* Serotherapy of iceterohemorrhagic spirochetosis has given most encouraging results in the hands of Martin and Pettit, when given in the first days of the disease it may arrest it Dopter relates that Levaditi and Harvier have apparently established by the identical histologic lesions induced in rabbits by inoculation of an emulsion of brain substance from human cases of epidemic encephalitis, that the virus is filtrable cannot be cultivated on ordinary mediums, and is essentially different from the virus of poliomyelitis and is not neutralized by convalescents' serum In conclusion he refers to Noguchi's *Leptospira icteroides* as one of the finest bacteriologic discoveries of our epoch if his statements are confirmed In spite of the flood of literature on influenza, no new acquisition can be cited

The Spinal Fluid in Epidemic Encephalitis—Benard remarks that although the cerebrospinal fluid may be absolutely normal yet this seems to be the exception in the last few months of the present epidemic Lymphocytosis is common but the fluid is always clear, there may or may not be albumin and glucose is not constant but the latter is so frequent that a glucose content of from 0 67 to 1 06 gm is a material aid in the diagnosis The urea content is normal unless there is uremia No specific biologic reaction has been discovered yet

Presse Medicale, Paris

June 12 1920 28, No 39

*Voluntary Apnea Test L Binet and M Bourgeois—p 381
Fasting Stomach Content L Pron—p 381
Degeneration of Lenticular Nucleus P L Marie—p 384

Voluntary Apnea Test—Binet and Bourgeois recalls that the functional reserves of heart, kidney and lungs can be estimated by the length of time a person can hold his breath after a deep inspiration Two myxedematous patients were able to hold their breath for 90 and 110 seconds, with chronic bronchitis and pulmonary emphysema the apnea could be kept up only for 21 seconds with pulmonary tuberculosis even those with slight lesions the average was 14 seconds with well compensated heart disease 34 seconds and with failing compensation 19 The latter figure was also the average with kidney disease uremia and high blood pressure The findings with this test do not parallel those of the vital capacity but throw light on the degree of impairment of respiratory functioning

Fasting Stomach Content—A previous communication from Pron on this subject was reviewed June 19 1920 p 1745 He argues to prove the greater diagnostic value of investigating the stomach content fasting rather than after a test meal With the latter a pure mucous catarrh e capes detection as also microretention filtering yields an incomplete conten the tint of the chyme masks any pathologic tint and the slow or rapid rate of gastric secretion may mislead as to the total secretion when examined an hour after the test meal In short he declares cancer is the only pathologic condition in the stomach in which the diagnosis is aided by analysis after the test meal and even with this we must not forget that achlorhydria may be encountered sometimes even in the elderly with nonmalignant conditions

On the other hand analysis of the fasting stomach con ent differentiates frank dyspepsia from dyspep ia secondary to liver disease by the pure bile in he stomach With an ulcer the test meal findings are merely those of ord nary hyper chlorhydria while the finding fastin, of a m d ra e o il and hydrochloric acidity (for e mpl) is highly instructive and l

cedure is applied After extraction of the stomach content and obtaining a negative Adler reaction, he pours through the stomach tube 200 c c of a 1 per cent solution of acetic acid Waiting for a few seconds then aspirating it and testing for the hematin crystals which are constantly present on every ulcerating surface, clinches the diagnosis of gastric ulcer The fasting stomach content also reveals continuous hypersecretion when the clinical findings otherwise may suggest merely hyperchlorhydria or possibly—from the delayed evacuation, dilatation and atony of the stomach—hypochlorhydria It may also clear up the diagnosis of some serious stomach condition when there are no decided symptoms but only a bad general condition, lassitude and vague stomach malaise In one man who weighed 44 kg and ate at will and had never had vomiting nor pain nor heartburn the fasting splash, hypersecretion and positive Adler test first revealed the old ulcer

Progres Medical, Paris

May 22 1920 **35**, No 21

Symptoms with Wounds of Cauda Equina A Barbe —p 225
Accidental Amenorrhea M Dalche —p 227
Physical Training in Connection with Courses of Mineral Waters P Mathieu —p 229
Bismuth in Therapeutics G Paroy —p 229
*Perforation of Lung with Pneumothorax H Lux —p 231

Spontaneous Perforation of Lung with Induced Pneumothorax—Lux comments on the comparative frequency of spontaneous perforation of the lung in the course of induced pneumothorax, and the usual effusion which follows it He reports a case of the kind with prompt subsidence of the symptoms which had never been alarming at any time The course depends on whether the perforation occurs in comparatively sound tissue, when this is the case little harm results

Revue Franç de Gynecologie et d'Obstet, Paris

January 1920 **15**, No 1

The Lower Segment of the Gravid and Parturient Uterus and Its Contracture L Demelin —p 1
Colloid Ovarian Cyst Two Cases R Karhausen —p 29
When Should Parturients Get Up? J Vanverts —p 35

February 1920 **15**, No 2

*Trachelopexy for Grave Genital Prolapse A Delassus —p 49
*Sterility of the Male F A Deluca and V Widakowich —p 62
Case of Hysteric Amenorrhea D Christides —p 68

Grave Genital Prolapse—Delassus gives an illustrated description of the method of fastening the cervix stump after amputation of the uterus, to the abdominal rectus muscle—a technic which he has applied in fifty cases He prefers to supplement it with colpopexy at the same sitting Apart from a case of pneumonia and one of tetanus, there was only one death in his fifty cases In one case he found later that the cervix stump had stretched from 3 to 12 cm, but there was no further tendency to prolapse

Sterility of Male Origin—This article reports the microscopic examination of the sperm of 100 men selected at random at Buenos Aires In 10 per cent the semen did not contain spermatozoa All in this group had had gonorrhea at some time

Policlinico, Rome

June 7 14 1920 **27** No 23 24

*Medical Treatment of Amebic Liver Abscess T Pontano —p 607 Concluded
*Lymphosarcomatosis C Zoli —p 615

Efficacy of Emetin Treatment of Amebic Liver Abscess—Pontano argues that what Rogers calls the presuppuration stage of amebic liver disease—during which alone, the latter says medical measures are effectual—is in reality the stage of the established abscess Hence it follows that medical measures are effectual at any stage, and Pontano's experience in ten cases has demonstrated this to be a fact Not one of his ten patients has had any recurrence during the year or more since to date of writing In eight of the cases the diagnosis was confirmed by exploratory puncture He adds that the ameba may not be found in the stools or puncture fluid, but the microscopic aspect of the latter is sufficient to diagnose the abscess by the albumin cell detritus, scanty degenerated cells, erythrocytes, fat droplets and crystals of fatty acids, even without true pus Emetin injected intramuscularly, from 0 09 to 0 15 gm daily for three days, is the rule, two courses the first month, then one course a month for eight or nine months He gives a mild purge before each course, and sometimes gives a decoction of ipecacuanha by the rectum The dysentery may flare up at first, this should not modify the treatment, but the pulse and respiration must be supervised, stopping the drug on signs of intolerance It arrests the necrotic process, and the contents of the abscess are gradually resorbed He warns, however, that if secondary infection is transforming the products of the abscess to true pus, surgical measures are indispensable But otherwise, neither the gravity of the abscess, its size or its age contraindicates exclusive medical emetin treatment This acts on the dysentery itself and on multiple abscesses Amebic abscess of the liver belongs to medical therapeutics as much as syphilitic disease of the liver

Lymphosarcomatosis—Zoli calls attention to the fact that the primary lesion in the case reported was in the inguinal glands and the malignant disease might have been exterminated if the groin focus had been excised in time

Riforma Medica, Naples

May 1 1920 **36**, No 18

Lethargic Encephalitis A Gasbarrini and A Di Gradi —p 421
Roentgen Findings with Incipient Pulmonary Tuberculosis C Guarini —p 423
Paroxysmal Hemoglobinuria G Molinari —p 432

May 8 1920 **36** No 19

Vaccine Therapy in Influenza A Gasbarrini —p 441
Cerebrospinal Fluid in Lethargic Encephalitis P Boveri —p 444
Duodenal Ulcer from Lead Poisoning R Cassanello —p 445
Technic for Draining Suppuration D Taddei —p 447

May 15 1920 **36** No 20

Anhidrosis with Spinal Cord Disease G A Pari —p 462
Diplococcus Isolated in Case of Lethargic Encephalitis Tron —p 465
Fibrous Bronchiolitis D de Concilis —p 466
The Blood Pressure G Galeotti —p 468

May 22 1920 **36**, No 21

*The Pituitary and Scleroderma G Izar —p 482
Etiology of Lethargic Encephalitis O Palermi —p 486
Primary Epithelioma of the Peritoneum G B Farmachidis —p 489
Chronic Intestinal Stasis S Menghetti —p 492

The Pituitary and Scleroderma—Izar advises in cases of scleroderma to investigate the functioning of the endocrine glands not only in the patient but in other members of the family endeavoring thus to find which of them is below standard In this way he deduced that the pituitary was primarily responsible for the scleroderma in a girl of 7, and his assumption was brilliantly confirmed by the rapid cure of the scleroderma under pituitary treatment and the persistence of the cure during the year to date The sella turcica was rather larger than normal for the child's age, 7 mm in height and 19 mm in diameter

Brazil Medico, Rio de Janeiro

May 4 1920 **34**, No 18

*The Conception of Cataphrenias A Austregesilo —p 277
*Anthropometric Data with Brazilian Anemia R Kehl —p 280
Insect Transmitting Mal de Caderas E von Bassewitz —p 283

Cataphrenias—Austregesilo applies this term to conditions which simulate dementia praecox but in which the condition gradually subsides as the nervous system regains tone It may have a syphilitic origin or other cause, such as shell shock and many cases labeled dementia praecox in which the recovery later has baffled the clinician, belong in this category Insomnia, distaste for the ordinary duties of life, and dislike for other members of the family are among the earliest symptoms, with phobias, and lack of interest in the environment This first phase merges into apathy, asthenia and mental confusion or there may be delirium, hallucinations and false phobias The improvement or complete cure in time refutes the diagnosis of dementia praecox

Brazilian Anemia—Kehl is in charge of one of the health stations recently organized in the system of Prophylaxia Rural and here reports the physical data in regard to the people of the Merity district, showing the extremely low level of development and health

Semana Medica, Buenos Aires

March 4 1920 **27**, No 10

*Exploration of Liver Functioning Tiburcio Padilla—p 319
Psychophysiology of the Aviator J A López—p 336 Cont'n
*Function of Frontal Lobe A M Sierra—p 338
System of Public Hospitals and Charities in Ecuador Colombia Venezuela and Mexico E R Coni—p 339
The Emotion of the Infinite M Ruiz Maya—p 342
The Puericulture Institute of the Paris Medical School L Mathe—p 345
Hiccup F Daltabuit—p 346

Tests of Liver Functioning—Padilla reviews the whole field of tests to determine the functional capacity of the liver in its various directions and the accepted interpretation of the findings

Functions of the Frontal Lobes—Sierra's patient was a physician with a chronic empyema in both frontal sinuses The abscess pressed on the poles of both frontal lobes but the only disturbance was in the use of the hands the patient having forgotten completely what a fork spoon etc are meant for He could name them but looked at them as a baby or a savage would who had never seen table utensils used His impulse was to eat from the plate with his hands In three weeks after the sinuses had been cleared out, the apraxia had entirely disappeared

Siglo Medico, Madrid

May 1 1920 **67** No 3464

*Fractioned Analysis of Stomach Content R Saenz de Santa Maria y Marron—p 321
*Probable Identity of Hyperchlorhydria and Ulcer Gonzalez Campos—p 323 Concluded in No 3466 p 364

May 8 1920 **67** No 3465

First Case of Ainhum Observed in Peru O Soto and J L Raffo—p 341

May 15 1920 **67**, No 3466

Case of Associated Scurvy and Beriberi G Garcia Urdiales—p 361

Fractioned Analysis of the Stomach Content—Saenz leaves the stomach tube in place for an hour or longer and examines the stomach content at intervals He uses a tube 75 cm long and 6 mm in diameter, with a fenestrated olive that weighs 8 gm The outer end of the tube lies between the teeth and the cheek and the patient can read and talk He aspirates the stomach content every fifteen minutes until no more can be obtained by aspiration with the subject on his back, side or in the knee-chest position Between each aspiration he rinses the syringe and injects air Acidity, fasting of over 1 per thousand he regards as a sign of stomach disease His experience confirms that gastric pain is due to exaggerated peristalsis rather than to hyperacidity With gallstones, there is usually hyperacidity in the young while in the elderly the tendency is to achylia or hypochylia, the stomach otherwise normal

Identity of Hyperchlorhydria and Peptic Ulcer—Gonzalez argues that the clinical picture of hyperchlorhydria is probably from an already established ulcer Fully 66 25 per cent of dyspeptics in his experience in Spain have hyperchlorhydria He noted hyperchlorhydria in 96 2 per cent of 715 positive cases of gastric ulcer, only 2 09 per cent having normal gastric chemistry The acidity with ulcer need not be very high An excess of acid does no harm with normal stomach walls, some solution of continuity is necessary before there can be corrosion The pain from the ulcer is probably due to this corrosive action and not to excessive peristalsis He has witnessed extreme peristalsis during roentgenoscopy, without pain while in other cases the pain was intense when this revealed no peristalsis The fact that the treatment which cures ulcer cures also hyperchlorhydria is a still further argument in favor of their identity He cites from the literature considerable data which he thinks, sustain this view

Deutsche medizinische Wochenschrift, Berlin

Jan 29 1920 **46** No 5

The Sensation of Thirst L R Müller—p 113
*Azurophil Inclusion Bodies in Erythrocytes G Walterhofer—p 116
The Blood Picture Associated with Plasma Cells (Turk) Arneth—p 119
Diverticulum of the Stomach C Nauwerck—p 119
Symptoms from Antirabies Treatment W H Hubner—p 121
*Pneumoperitoneum in Roentgenology of Liver E. Rautenberg—p 123
Traumatic Tuberculosis A Wolff Eisner and L Zahner—p 124
*Relation of Hydrochloric Acid to Pepsin L Michaelis—p 126
Otogenous Vertigo A Guttich—p 127
Mercury Lamp plus Silver Nitrate in Dermatoses K Schindler—p 127
Treatment of Furuncles K Weigert—p 128
Syphilis and the General Practitioner M Josephi—p 130

Azurophil Inclusion Bodies in Erythrocytes—Walterhöfer states that the pathologic significance of inclusion bodies in erythrocytes lies not so much in the presence of the bodies within the cell structure as the fact that erythrocytes containing them appear in the peripheral circulation No matter how much the shape and the staining properties of these inclusions may vary they are always traceable to some reaction in the bone marrow with exaggerated production of new red corpuscles It is only in these new red blood cells that the azurophil inclusions are found He remarks in conclusion that when the observer realizes that the different forms of these azurophil inclusions represent merely different stages of the process of extruding the nucleus of the erythrocyte, the ring bodies and dots are less bewildering The ring bodies and dots display identical staining properties and addition of an alkali facilitates the process These inclusions occur more frequently than has hitherto been recognized. He describes in detail three cases of pernicious anemia in which they were found in large numbers and over long periods The inclusions found in malaria and in various poisonings have nothing to do with these developmental processes of the red corpuscles they originate in the corpuscles already in the blood stream They are the direct expression of the effects of certain definite injuries and aid in the diagnosis of the nature of the injuries

Nervous and Psychic Disturbances Following Inoculation Against Rabies—Hubner reports several cases in which physical and mental disturbances followed injection of antirabic serum One man of 27 was bitten by a dog and although there was no evidence of rabies, he received eighteen prophylactic injections of antirabic serum The last day he received two injections as he was leaving the city On the journey home he felt formication in the right side of the face and six hours later right facial paralysis developed, and five days later the same on the left side, with pains in the right ear Opening the jaws was painful, and frontal and occipital headache was present and pain in the back at time testifying to neuritis of the cerebral and certain peripheral nerves with a certain amount of psychic disturbance In three months he seemed to have quite recovered and had resumed work Nothing else was known to explain the facial diplegia, rabies itself, Hubner thinks can be definitely excluded in the case In eight other cases he noted weakness and psychic changes after antirabies treatment His experience thus warns that antirabies treatment is liable to temporarily incapacitate to some extent for regular work and responsibility

Pneumoperitoneum in Roentgenology of the Liver—Rautenberg discusses in connection with seven cases the liver defects that are revealed by raying after injection of air or oxygen into the abdominal cavity comparing the clinical with the necropsy findings As regards the indications for the pneumoperitoneum he emphasizes that they are quite limited and that the discomfort of the procedure for the patient must be weighed and compared with the expected gain from a diagnostic standpoint It is not a question whether this method aids in the diagnosis but whether we have exhausted all other clinical means of diagnosis and what more can be reasonably expected from the pneumoperitoneum method

The Relation of the Hydrochloric Acid of the Stomach to Pepsin—Michaelis says that pepsin in order to develop its highest degree of efficiency must have a very high acidity to work in irrespective as to whether this degree of acidity furnishes the most favorable conditions for the absorption of water by the protein to be digested It is simply a wise provision of Nature that the optimal acidity for the action of pepsin coincides with the optimal conditions for easy absorption by the ordinary food proteins

Jahrbuch fur Kinderheilkunde, Berlin

1920 **91**, No 5

*Test Alimentary Glycemia A Frank and Lotte Mehlhorn —p 313
*Chlorin Content of Infants Blood Serum K Scheer —p 347
*Pathogenesis and Treatment of Enuresis A Pese —p 357
Congenital Atresia of the Duodenum C Ritter —p 369

Alimentary Glycemia Test—Frank and Mehlhorn report the results of thirty-seven different sets of tests on young children In some of the tests 8 gm of cane sugar per kilogram were given the child fasting and the blood was examined for sugar every half hour Pronounced hyperglycemia followed in every instance and persisted for several hours The same was noted with starch given in the same way but casein and fat did not cause any change in the sugar content of the blood With the sugar tests, there was always glycosuria, but not with starch Starch seems to render the kidney filter less permeable for sugar

The Chlorin Content of the Blood in Infants—Scheer refers to the chlorin level in the serum and its dependence on the secretion of gastric juice That is, during digestion the chlorin content of the serum rapidly declines, but rises again after the stomach is emptied

Enuresis—Pese says that enuresis nocturna seemed to become more prevalent during the war, at the children's asylum at Breslau 30 per cent of all the small children and 10 per cent of the older children were subject to it He made a prolonged study of twenty-three small children and eleven older children and became convinced that enuresis is of two types the symptomatic, and the enuresis connected with the depth of the slumber This latter form is characterized by its persistence from birth, with slight if any intermissions, the frequent coincidence with constipation, and the fact that therapeutic suggestion has no influence on it Sedatives aggravate the enuresis, but it can be cured usually by waking the child at intervals before he gets too sound asleep, plus restriction of intake of fluids after midday Symptomatic enuresis is amenable sooner or later to therapeutic suggestion but this type may be combined with the "deep sleep type"

Munchener medizinische Wochenschrift, Munich

May 21 1920 **67**, No 21

Deep Roentgen Ray Therapy in Gynecology R T Von Jaschke and P W Siegel —p 593
The Technic of Sacral Anesthesia E Zweifel —p 595
Treatment of Severe Influenzal Pneumonia Uffenheimer —p 597
Agglutinoscopy of Bacterial Cultures P Kuhn —p 600
Etiology and Diagnosis of Acute Bilateral Blindness H Hensen —p 601 Conclusion in No 23 p 637
Sensibility of Digestive Tract in Man L Fischl —p 604
Health Certificates for Marriage Schubart —p 605
Treatment of Old Luxations of Shoulder A Schanz —p 605
Errors in Diagnosis and Treatment of Muscular Rheumatism W Smitt —p 606
*Toxicity of Arsphenamin K Taege —p 606
Nature and Cause of Arteriosclerosis W Hueck —p 606 Begun in No 19 p 535

Toxicity of Arsphenamin—Taege reports a case in which 3 3 gm of neo-arsphenamin were self-administered in large doses (0 6 to 0 9 gm) in five days The results were transient fever 104 F, rapid pulse palpitation, sense of oppression nausea, and vomiting (once only) Over the surface of the body, including soles of the feet and the palms of the hands was a bright red eruption, with small spots, itching slightly Taege recommended increased fluid intake and sweating procedures The question is how the patient could bear such large quantities of arsphenamin without great harm resulting whereas, in other cases, very much smaller quantities have had a serious or fatal effect Does the body in disease react differently to arsphenamin than in health? Or is congenital hyposensibility to arsphenamin sometimes present, although its existence is usually denied? The patient in this case was a young physician whose assumption of syphilis following exposure proved later to be erroneous, so his self-dosing was superfluous

Therapeutische Halbmonatshefte, Berlin

May 1920 **34** No 9

Preventive Inoculations and Vaccine Therapy H Langer —p 253 Conclusion in No 10
The Physician Before the Law W Hanauer —p 259

Wiener klinische Wochenschrift, Vienna

May 20 1920 **33** No 21

Injections of Alcohol into the Gasserian Ganglion H Pichler —p 441 Conclusion in No 22 p 473
Gasserectomy Sixteen Cases E Ranzi —p 445
Surgery and Roentgen Rays in Trigeminal Neuralgia R Lenk —p 446
Lichen Trichophyticus G Riehl —p 448
Proposed Changes in Medical Education J Meller —p 448

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

April 24 1920 **1** No 17

Adaptation to Darkness C O Roelofs and W P C Zeeman —p 1422
*Mucocele in Sphenoid Sinus J van der Hoeve —p 1431
*High Blood Pressure and the Ambard Constant J Lankhout —p 1439
Case of Pure Tetragenus Meningitis M van Riemsdijk —p 1445

Mucocele of the Sphenoid Sinus—Van der Hoeve tabulates the data of eight cases he has found on record and compares them with one personally observed In the total nine cases one eye was blinded and in three other cases the other eye was threatened The diagnosis had not been made before the operation in any case the roentgen-ray findings are deceptive Treatment can be only operative, best by way of the nose Fluctuations in the fluid content of the mucocele were evidently responsible for the variability of the clinical picture The data presented confirm the dictum that when vision is becoming impaired and no cause for this can be discovered, the nasal sinuses should be opened up This may reveal a mucocele or empyema which otherwise may speedily entail blindness In a recent case although a little pus was found in the nose investigation through the nose of the nasal sinuses failed to disclose any focus and the patient became blind in a few days from retrobulbar neuritis Finally, opening the posterior sinus cavity revealed a large amount of pus on one side and a little on the other This shows hat even the rhinologist, with the aid of the roentgen rays, is not always able to detect sinus mischief without an exploratory opening up of the sinuses

High Blood Pressure and the Ambard Constant.—Lankhout gives the details of age, blood pressure, urea content of the blood and the Ambard ureosecretory index in twelve cases and emphasizes that a high blood pressure in itself is not usually a serious matter The prognosis depends on the complications in kidneys, heart and nervous system, and we are unable to estimate these until they are quite pronounced The Ambard constant does not help here We have no grounds for the assumption that the high blood pressure is always secondary to heart kidney or vascular disease It has no more significance than the discovery of a murmur or hardening of a normally soft organ Because we can measure the blood pressure we have paid too much attention to it and hidden our ignorance behind the term "essential hypertension The rise in blood pressure is merely one element of a morbid series which has to be regarded as a whole

Hospitalstidende, Copenhagen

April 21 1920 **63** No 16

*The Duodenal Tube A Tvilstegaard —p 241 Concn in No 17 p 257
*Gallstones and Achylia F Rydgaard —p 251

The Duodenal Tube—Summarized July 3, p 72

Cholelithiasis and Achylia—Rydgaard reports a new instance of the connection between gallstone disease and achylia Rovsing found the gallbladder full of stones in doing splenectomy on a woman of 65, but did not molest the gallbladder at the time Test meal findings showed achylia or hypochylia Four years later the gallbladder had been entirely destroyed functionally, but the gastric secretion was practically normal This apparently contradicted Rovsing's assertions that achylia is almost inevitable when the cystic duct is totally obstructed Necropsy revealed that the common bile duct had dilated until it had formed a new gallbladder In a recent compilation of eighteen cases of total obstruction of the gallbladder in subjects under 50, Rydgaard found achylia or hypochylia in 83 per cent , in 52 per cent in thirty-two in which the cystic duct alone was impermeable and in 27 per cent in seven in which the gallbladder alone was shut off

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THE RÔLE OF DEEP ALCOHOL INJECTIONS IN THE TREATMENT OF TRIGEMINAL NEURALGIA *

HARVEY CUSHING, M D

BOSTON

The injection of the nerves with some tissue fixative as a means of controlling neuralgias, particularly those of the face, is an old story [1] and various substances have been used for this purpose, chloroform introduced by Bartholow in 1874 being possibly one of the first used and first abandoned Osmic acid, proposed by Billroth and Neuber in 1884, then had its period of popularity, and the injections were first made into the foramina of exit of the nerves from the facial bones The results were too transitory to give the procedure a very lasting place in surgery

An improvement on these methods, with much more satisfactory results, was introduced in 1902 in France by Pitres and Verger,[2] and in 1903 by Schlosser [3] in Germany, in the form of deep injections of the nerves near their foramina of exit from the skull—the foramen ovale and rotundum It was impossible without too great risk of damage to neighboring structures to reach the ophthalmic division in this way, but as the pain in far and away the larger number of cases originates in the territory of the maxillary and mandibular divisions, this was of no great moment

The method, further developed by Ostwald, and by Levy and Badoin, reached this country the following year (1907) and was largely popularized through articles by Hauck,[4] Hugh T Patrick,[5] Hecht,[6] and Kiliani,[7] and there can be no question but that an immense number of needless peripheral operations have thereby been avoided, for the relief from a successful injection should be as enduring as that following a peripheral neurectomy The popularity with which this procedure was received is evidenced by the fact that during the six years after his original Sammel-Referate, Flesch [8] collected from the literature ninety additional titles

The procedure has its limitations as all know The relief is but temporary and with each successive injection a shorter interval of freedom from pain is apt to be secured This, however, is true of peripheral operations as well, which in the hands of the inexpert may leave very unsightly scars on the face but, on the other hand misplaced alcohol injections may do damage far worse than leaving unsightly scars

Examples of most distressing after-results of these cases have appeared from time to time in our clinic—such complications as one rarely sees in the present day after a ganglion operation Paralysis of the oculomotor nerves is one of the commonest Locking of the jaw from infiltration, and subsequent fibrosis of the pterygoid muscles is another frequent occurrence Paralysis of the motor fifth is usual after injection of the mandibular division, and function may not be regained Sloughs of the nasal bones with subsequent ozena have been reported and some of the intranasal injections have been followed by critical secondary hemorrhages Certainly there is every reason to decry the intranasal injections as practiced by rhinologists for, as has been pointed out, if there is any reason to inject Meckel's ganglion, it can be reached far more safely by the usual method through the cheek than through the nose For some unaccountable reason, facial paralysis is not uncommon, whether purposeful or accidental is not entirely clear Four patients in my series presented themselves for a gasserian operation with a complete facial paralysis due to preceding injections and, as might have been expected, both of them subsequently had a corneal ulcer Two of them had been injected by the same physician, but I did not venture to make inquiries regarding the procedure employed, though I surmised that the injection into the seventh nerve was intentional

But if these complications are lamentable, still more distressing are the examples of labyrinthine trouble due to the accidental injection into the middle ear The eustachian tube is but a few millimeters from the mandibular branch, at the foramen ovale and if sufficient local anesthetic is added to the alcoholic solution to render the mucous membranes insensitive, the middle ear may become filled with alcohol and a slough result The following story is not an exceptional one

In 1905 a woman then 33 years of age began having paroxysmal pain in her left lower jaw and teeth Three were extracted without relief Six deep alcohol injections were

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* From the Peter Bent Brigham Hospital

* This paper formed a section of the Nathan Lewis Hatfield Lecture on the Major Trigeminal Neuralgias delivered at the College of Physicians of Philadelphia Dec 16 1919 Sections on the varieties of facial neuralgia and on the gasserian operation and its end results will appear elsewhere

1 Indeed as Kurzweily has pointed out Francis Rynd (1843) who first employed hypodermic injections and Alexander Wood (1853) who introduced the hollow needle and syringe did so with the out spoken purpose of injecting morphin into the painful areas of sciatic neuralgia rather than with the object of introducing solutions of drugs into the body as a whole

2 Pitres and Verger Nevralgie faciale traitee par les injections modificatrices d alcool Soc de méd et chir de Bordeaux July 25 1902

3 Schlosser Heilung peripherer Reizzustande en ibler und motorischer Nerven Ztschr f Augenh **10** 335 1903

4 Hauck The Treatment of Neuralgias with Injections of Alcohol St Louis M Rev **54** 505 1906

5 Patrick H T A New Treatment for Trifacial Neuralgia with Report of Cases A Preliminary Report Illinois M J **11** 385 388 1907

6 Hecht d Orsay The Methods and Technic of the Deep Alcohol Injections for Trifacial Neuralgia J A M A **49** 19 (Nov 9) 1907

7 Kiliani Schlosser s Alcohol Injection into the Foramen Ovale for Recurrent Trigeminal Neuralgia After Extirpation of the Gasserian Ganglion J Nev & Ment Dis **34** 777 1907

8 Flesch J Die Behandlung von Neuralgien mit Injektionen Wien med Wchnschr 1914 No 8 [illegible] J [illegible] is given in Flesch original article [illegible] u Chir **12** 561 609 1909

given by her brother, a physician, in the attempt to reach the mandibular division During the course of the last she became suddenly dizzy and deaf and for some days was extremely ill, with vomiting and vertigo The drum ruptured and a profuse discharge occurred

She has suffered from dizziness and tinnitus for the subsequent fourteen years, and the middle ear has never healed despite two radical operations She still has a bad third divisional neuralgia, but the labyrinthine disturbance so far outweighs this that she bears this lesser torment with stoicism

It is possible that my impressions of the sorry consequences of deep injections are exaggerated for the reason that the bad results of these measures are likely to gravitate in the course of time to a clinic where the gasserian operation is frequently performed But I must confess that I never give an alcohol injection myself without misgivings never use a general anesthetic for the purpose, and never force the injection unless absolutely sure that the needle is in proximity to the main nerve trunk Under these circumstances but a very small amount of alcohol is needed, and in the series, which is a long one, there has been only a single complication—an abducens palsy which ultimately was recovered from

So far the balance would appear to weigh distinctly in favor of the simple measure—the injection—if carried out by practiced hands directed by the capacity to visualize deep anatomic structures This is more or less of a gift, and there are no rules to follow One introduces the needle to the nerve, and it is difficult to see how the eustachian catheter and the fluoroscope, as suggested by Pollock and Potter,[9] can do more than complicate a procedure whose simple rules were laid down ten years ago and which merely depends on a working knowledge of the deep anatomy of the head

But at best, even in cases of minor neuralgia the procedure must be often repeated and most observers agree that nine months of relief represents about the average duration Flesch[8] reported 262 injections in eighty patients, 102 owing to recurrence, and Patrick[10] in 1911 recorded a series of 500 deep injections (second and third divisions) in 150 patients Dr Patrick, who has had as large an experience as any one with these procedures, stated at that time that the results were "good" (successful) in about 30 per cent, "partially successful" in about 43 per cent, and "misses" (unsuccessful) in about 26 per cent He also stated that in only 18 per cent of cases could the first attempt at either branch be regarded as successful

Unquestionably the repetition of injections may be greatly overdone In an earlier section of this address,[11] a clinical history was given of a young woman who had sixty-two deep injections in the four years before her trigeminal neurectomy was performed The following case history tells a similar story

Gasserian Series 311 *Surg No* 10250 *A three-divisional neuralgia of many years duration Repeated alcohol injections for last twelve years Gasserian operation with preservation of motor root*

A woman, aged 72, began having neuralgia in the maxillary division in 1895, twenty-four years before her admission The early paroxysms were limited to the cheek and lip on the left side They were of increasing frequency About a year later they suddenly changed in character and spread over the entire left side of the face and scalp The pain, invariably paroxysmal in character would be initiated by touching the skin of the face or hair, or the insertion of food in the mouth

Attempts were made to control the early attacks with morphin without success The patient had a series of very severe attacks in 1897 and this experience was repeated for the next nine years In her worst year she was practically bedridden for eight months

Matters dragged on until 1907, when she had her first alcohol injection with relief for sixteen months Since that time, whenever an attack has appeared she has had both the second and third divisions injected, but the procedure has been increasingly inefficient All told, deep injections have been given during the last ten years on forty-seven different occasions On admission the entire left trigeminal area, including the tongue, was involved in the paroxysms

Her gasserian operation was performed, April 5, 1919 The sensory root was avulsed and the motor root preserved Total sensory anesthesia has resulted, and one may be confident that the result will be permanent She would have been spared much suffering has this been done ten—indeed twenty—years before

There are certain major types of neuralgia often, as in the case of this patient, with early involvement of all three divisions, which are incompletely if at all relieved by these deep extracranial injections, and some neurologists have ventured to go farther in the effort to inject the ganglion itself It is quite probable that those who have given a large number of deep injections for neuralgia may have occasionally observed that the subsequent anesthesia had spread beyond the limit of the distribution of the trunk, primarily the object of attack The following is an account taken from the hospital note of my first experience

P B B H Surg No 2624 *Deep injection of mandibular division with unexpected spread through gasserian envelops*

Mr F S R aged 40, had had an involvement of the right third division of six years' duration I had made an unsatisfactory attempt to give him a deep injection in 1911 without the production of anesthesia and he had had a number of subsequent attempts elsewhere with no better results

March 13 1915 *Accidental injection of ganglion* On slowly inserting the needle in the direction of the foramen ovale to a depth of about 4 5 cm, it encountered a dense resistance, like cartilage which made me fear that it might have reached the eustachian tube During the insertion the patient complained more than usual of local discomforts (of pressure deep in the cheek) but had experienced no pain in the area of distribution of the third division

It was anticipated that the injection would meet with considerable resistance on the part of the tissues but to my surprise the first drop or two went in without any resistance whatever After a moment's delay to determine the effect, the patient suddenly said "My tongue and lip are getting numb," and then very shortly "My face is numb" No especial attention was paid to this, except that it was gratifying to realize that the nerve had actually been struck

During the next five minutes less than half a cubic centimeter of the solution was introduced, when to my astonishment he said "Why the whole half of my head is numb, tongue and all"

This proved to be the case on examination—anesthesia of all three divisions with loss of the corneal reflex with deflection of the jaw to the right on opening the mouth The patient complained of feeling somewhat dizzy and a little nauseated, and it was observed that there was a very marked nystagmus to the left side—none to the right The quick component was to the left with a slow return, but the jerks were very rapid On looking to the left and on looking upward there was a slight rotary movement

9 Pollock L J and Potter H E Experimental Studies of Injection of the Gasserian Ganglion Controlled by Fluoroscopy J A M A 67 1357 1359 (Nov 4) 1916

10 Patrick H T The Technic and Results of Deep Injections of Alcohol for Trifacial Neuralgia J A M A 58 155 (Jan 20) 1912

11 Cushing Harvey Am J M Sc to be published

It was surmised that the arachnoid sheath passed down from the ganglion farther than usual along the third division in this patient, and that the fluid had run up and filled the subarachnoid space enclosing the ganglion itself If this was actually what occurred, it may happen under these circumstances in other cases This hazard is the strongest argument against the purposeful injection of the ganglion, for if alcohol should happen to get into the arachnoid spaces around the ganglion it would easily pass into the lateral recess of the posterior fossa

The late reports from this patient show, in spite of the very small amount of alcohol which was introduced, that the second and third divisions including the motor fibers remain completely paralyzed, and there has been no return of pain after nearly five years If the danger of ganglion injections could be eliminated and if they cou'd be followed by such a good result as this, the surgery of the gasserian would fall into desuetude, but this unfortunately is not the case

Any one who is familiar with the appearance of the ganglion in the living, bathed as it is with cerebrospinal fluid, would be terror stricken at the idea of blindly injecting alcohol into its arachnoid capsule The proposal doubtless took its origin in Heinrich Braun's procedure of blocking the ganglion by the injection of a local anesthetic to produce regional anesthesia for operative purposes But the introduction of a local anesthetic is a far different thing from introducing a tissue fixative It is difficult to believe that a procedure fraught with so many possibilities of disaster could have been seriously advocated

First proposed in 1912 by Hartel [12] of Bier's clinic, and introduced in this country by Grinker,[13] the measure has been taken up by many, and considering the fact that the results at best are with rare exceptions little better than after extracranial injections and that the complications are as bad if not worse than those seen after imperfect gasserian operations in their worst days, it is certainly time for someone to protest at this blind procedure In the matter of secondary keratitis alone Flesch [8] from his review of the cases believes that 50 per cent have suffered from eye troubles Hartel not only reports a case of meningitis, but has admitted to corneal complications in one in every four (25 per cent) of his first twenty-four cases, whereas certainly not one in ten patients after a sensory root avulsion has any subsequent trouble with the eye

Flesch mentions among the complications, vomiting, fainting, brachycardia, somnolence, ataxia, collapse, severe headache, fever (40 per cent of cases), stiffness of the neck cloudiness with increased tension of the cerebrospinal fluid—a so-called aseptic meningitis Hartel himself warns against the possibility of the mordant entering the lateral system of the posterior fossa

Some months ago a letter from which the following is a quotation was received from an English surgeon

> You will remember that I spoke to you about a young girl who was suffering from trigeminal neuralgia and who had the ganglion injected with alcohol by a well-known neurologist I do not know whether I told you that the alcohol overflowed from the ganglion with the result that the abducens and facial nerves were paralyzed and from the symptoms it is evident that the auditory had also been affected as the patient suffered much from giddiness I understand from her medical attendant that while the paralysis of the sixth and seventh nerves is being recovered from, the neuralgia is unfortunately returning I should mention too that there was some ulceration of the cornea which has left a distinct opacity Her medical attendant has just written to me to say that both he and the neurologist have come to the conclusion that an operation must now be performed for the purpose of dividing the sensory root

This girl aged 22 after three years of neuralgia was finally brought here about six months later and I have rarely seen a neuralgic of advanced years in such a desperate condition and not alone from pain and drugs For she had such extreme vertigo she could not raise her head there was an abducens and facial paralysis a trophic ulcer of the cornea, and she was reduced to 87 pounds weight

Enough has been said about these injection methods and their consequences They have been a great boon to innumerable cases of minor neuralgia when given with proper precautions and in certain cases of major neuralgia of obscure and uncertain type they are of value as a means of certifying the nature of the neuralgia by the brief period of relief which may ensue

Certainly in the major neuralgias true to type it is procrastination to use them and when carried to the point of injecting the ganglion itself, the recorded complications are so much worse than any complications which one sees at present after a gasserian operation that there can be no choice in the matter This is particularly so in view of the permanence of relief after the neurectomy and a relief of uncertain period even after a successful and uncomplicated ganglion injection

CONCLUSIONS

1 Deep extracranial injections of alcohol into the maxillary and mandibular nerve trunks near their foramina of exit from the skull have completely superseded *peripheral neurectomies*

2 In neuralgias limited to one of the two lower divisions and which may possibly not extend into the other trigeminal areas alcohol injections represent unquestionably the treatment of choice

3 When the neuralgia has spread beyond its original area and come to involve that supplied by the adjacent division, a trigeminal neurectomy must be contemplated, but if *no preceding deep injection* has been given it may be useful not only in insuring the type of the neuralgia but in giving the patient some warning as to what the numbness resulting from the neurectomy may amount to

4 They are sometimes useful furthermore, in determining in doubtful cases whether the syndrome is a true neuralgia of the tic douloureux type or one of the peculiar and rare pseudoneuralgias not amenable to relief either by injections or neurectomies

5 Even the extracranial injections are not entirely free from risk and in no cases *should they be purposefully* pushed to the point of attempting an injection of the gasserian sheath itself

6 With such perfect and permanent results as may be secured today by a trigeminal sensory root avulsion [14] the prolonged and repeated use of injections in refractory cases which involve more than one division should be deplored

12 Hartel F Ueber die intracranielle Injektionsbehandlung der Trigeminusneuralgie Med Klin **10** 58, 584 1914 Die Behandlung der Trigeminusneuralgie mit intrakraniellen Alkoholein pritungen Deutsch Zt chr f Chir **126** 429 552 1914

13 Grinker Julius A New Method of Treating Neuralgia of the Trigeminus by the Injection of Alcohol into the Gasserian Ganglion J A M A **60** 1354 (May 3) 1913

14 The mortality of the operation is In series there have been to date of writing fatality

THE TREATMENT OF COMBINED DIABETES AND NEPHRITIS *

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Several possible etiologic relationships may be thought of between such conditions as diabetes, arteriosclerosis and nephritis First and probably most important, there is the theory that all of these are due primarily to some infectious or toxic process, and the possibility that the same agency which damages one organ may also produce injury in one or more others With regard to secondary influences, it is scarcely conceivable that a pure nephritis could cause diabetes It is conceivable, however, that a primary arteriosclerosis might damage both the kidney and the pancreas It is barely imaginable that nephritis might cause hypertension, and this lead to arteriosclerosis, which in turn might affect the pancreas There has been in the past a strong suspicion that diabetes is a cause of arteriosclerosis, and in addition to the known frequency of association, especially in elderly persons with diabetes of many years' standing, evidence may be found in the high incidence of gangrene and the fact that this is almost invariably connected with advanced arteriosclerosis In severe diabetes there is sometimes a form of albuminuria which clears up under diabetic treatment, and albuminuria and showers of casts are well known accompaniments or precursors of diabetic coma Apart from such direct irritation, diabetes is a disturbance of nutritive function affecting all cells of the body, so that their power of resistance and repair is subnormal and they are more susceptible to all injuries Diabetes may thus predispose to renal and vascular disorders by increasing susceptibility to accidental injuries Positive proof of the foregoing interrelationships is lacking, and the evidence is chiefly statistical The following statistical observations have a bearing on this point

In 100 unselected diabetic cases in this institute the blood urea was found below 30 mg per hundred c c in sixty-seven, between 30 and 40 mg in seventeen, between 40 and 50 in ten, and above 50 in six These figures are mainly those obtained at admission on undetermined diets, but the series also represents more than a thousand analyses on these patients at different stages of treatment Renal function tests were performed especially when there was any suspicion of abnormality, and the McLean urea index was found below 80 in fourteen cases Four of these patients were clinically nephritics, two of them were in the fourth decade and two in the fifth decade of life, and one of each pair had hypertension In addition, there were twelve cases of hypertension with traces of albuminuria, and seventeen cases with palpably sclerosed peripheral vessels without albumin or hypertension All of these twenty-nine patients were elderly The sodium chlorid figures are scarcely capable of brief generalization here because of the uncertainty of normal standards, and will be given in detail elsewhere The impression may be stated that a large proportion of diabetics show noticeably high plasma chlorid concentrations and chlorid thresholds, which perhaps have some relation to the edema of some cases and the hypertension of others On the whole, it is doubtful whether diabetics show any higher proportion of clinical nephritis or impairment of nitrogen excretion than other hospital patients at corresponding ages, but some special tendency to retention of chlorids, vascular hypertension and arteriosclerosis may be suspected

There has also been opportunity for study of twenty-two supposedly nondiabetic cases of renal and vascular disease Six of these patients had marked nephritis, four of them with hypertension, the other sixteen were under treatment for hypertension alone The question arises as to the incidence of diabetes among such patients, especially as attention has been given in the literature to the occurrence and interpretation of hyperglycemia in hypertension cases Clinically, we must be governed by the usual criteria The carbohydrate-rich diet customary for these patients contributes to bring out any diabetic tendency, but an impermeable kidney may sometimes prevent glycosuria Transitory causes, special intoxications, etc, are known to affect the blood sugar in different ways but in general, when a patient can take carbohydrate-rich diet for long or indefinite periods with blood sugar within normal limits he is said to be free from diabetes, and when, on the other hand, high diets are accompanied by hyperglycemia which yields to restriction of carbohydrate and of total calories, such a condition is properly regarded as diabetes, even though it be mild and without glycosuria Two patients of this series were mildly diabetic in this sense, and in one of them the diagnosis was confirmed by marked hyperglycemia and slight glycosuria after ingestion of 100 gm of glucose The other patients of the series had normal blood sugars, and glucose tolerance tests which were performed in several of them gave normal results It is thus evident that hypertension in itself does not produce hyperglycemia Hyperglycemia found in such cases may be interpreted as evidence of diabetes the same as in other cases The proportion of pancreatic changes found at necropsies in cases of hypertension and arteriosclerosis fully accords with this conclusion

The treatment of combined diabetes and nephritis is conducted according to the usual principles for the two diseases A special difficulty is sometimes supposed to exist in the combined management, but recent methods have largely obviated the conflict Diabetic treatment by means of a high protein diet, gluten bread and the like may be inimical to an associated nephritis with impaired nitrogen excretion, but it is readily possible to adjust the protein ration to both diseases If meats are forbidden in the treatment of hypertension, the diet of a diabetic with hypertension is seriously limited, but with restriction of salt [1] such a patient is able to choose his protein at will One of the greatest dangers formerly consisted in acidosis in conjunction with nephritis, this is avoided under treatment which keeps acidosis strictly absent

To illustrate these principles, three cases of different types, each being the worst of its type in this series, have been selected for more detailed presenta-

* From the Physiatric Institute New York City and Morristown N J

* Read before the Section on Pharmacology and Therapeutics at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Allen F M Arterial Hypertension J A M A 74 632 (March 6) 1920

tion The first is a youthful patient with valvular disease, severe diabetes and nephritis, with marked tendency to hypertension and nitrogen retention, but without edema, decompensation or toxic symptoms

CASE 1—*History*—A man, aged 33, Irish-American, unmarried occupation clerical, was admitted Aug 17, 1919 His father was well at 72 His mother died at 36 of rheumatism followed by dropsy He has one brother and one sister in good health The family history was otherwise negative Th ough born at full term, he was a weak, undersized incubator baby, and always sickly He had pneumonia in infancy, and measles, mumps, scarlet fever, diphtheria, chickenpox and whooping cough before the age of 10 He never had tonsillitis or true rheumatism At 18 he had pain in the chest most of the year, and his physician diagnosed endocarditis The pain left after about a year, and he worked and enjoyed ordinary health, until at 25 years he had acute gangrenous appendicitis with uneventful recovery after operation Gonorrhea in 1913 cleared up under his physician s treatment without complications Syphilis was denied by name and symptoms The patient had had mild hay-fever for the last four years He had always had a huge appetite, very active bowels and apparently good digestion, but had remained thin nevertheless His life had been nervous and hard working but regular, with no excesses in sweets, alcohol or tobacco

Present Illness—In the summer of 1918 he caught cold on vacation and was surprised that he required a week to recover

arteries were palpably thickened There was a strong systolic murmur transmitted to the axilla and all over the precordia The blood pressure was 194 systolic and 142 diastolic The knee jerks were lively

Laboratory Tests—The urine was free from sugar and acetone, but contained heavy albumin and a few hyaline and granular casts which persisted throughout treatment The Wassermann reaction of the blood was negative The plasma sugar was 0 176 per cent before breakfast August 18 the plasma chlorids 648 mg per hundred c c the carbon dioxid capacity of the plasma 61 5 volume per cent the blood urea 134 mg per hundred c c The elimination of phenolsulphonephthalein was 5 per cent (1 5 per cent in the first hour, 3 5 per cent in the second) The urea index reckoned according to McLean was 4 7

Treatment and Progress—The patient was received as a bed patient because of his mitral regurgitation and hyperten sion Immediately after examination as there was no cardiac decompensation and it was desired to exclude rest as a factor in relieving the hypertension he was allowed to be up and about the ward freely with the consequence that his blood pressures registered 206 to 214 systolic and 160 to 170 diastolic with increased complaints of headache dizziness and weakness Treatment was begun with a salt-free protein-free diet of 50 gm of carbohydrate and 1 000 calories This diet consisted of starch and fat sometimes as puddings but generally baked into cookies with a variety of flavors to avoid monotony, and owing to the skill of the kitchen staff

TABLE 1—FINDINGS IN CASE 1

			Urine				Blood				Blood Pressure	
Date 1919	Weight Pounds	Fluid Intake C c	Volume C c	Specific Gravity	Total Nitrogen Gm	Sodium Chlorid Gm	Plasma Sugar per Cent	Plasma CO Volume per Cent	Plasma NaCl Mg per 100 C c	Urea Mg per 100 C c	Systolic Mm	Diastolic Mm
8/18	87¼	600	1 150	—	—	—	0 176	61 5	648	134	214	170
8/19	86	800	1 030	1 010	3 25	0 97	—	—	—	—	172	146
8/20		150	585	1 010	6 40	0 94	—	—	—	—	150	1[illegible]
8/21	84¾	450	485	1 013	2 65	0 59	—	—	—	—	160	130
8/22		300	485	1 012	2 84	0 71	—	—	—	—	1[illegible]	120
8/23	82¾	300	470	1 012	2 47	0 53	—	—	—	—	180	130
8/24		700	360	1 014	2 03	0 12	—	—	—	—	189	130
8/25	81¼	5 000	910	1 007		0 53	0 208	53 2	616	138	180	130
8/26		4 100	1,880	1 004	3 56	1 12	—	—	—	—	1 0	1[illegible]0
8/27	86½	3 800	2 500	1 006	4 82	1 89	—	—	—	—	146	110
8/28		5 100	2 780	1 004	4 19	1 64	—	54 1	494	73	148	130
8/29	87	3 500	2 280	1 005	3 43	0 80	—	—	—	—	208	1[illegible]6
8/30		3 500	2 390	1 005	2 90	0 41	0 19[illegible]	52 9	508	48	202	140
8/31	85½	4 000	2 200	1 003	3 10	0 24	— (fast day)	—	—	—	1[illegible]0	140
9/ 1		600	1 490	1 004	2 60	0 46	0 134	56 0	476	36	18[illegible]	18[illegible]

He returned to work unrefreshed, and by mid-September developed thirst and polyuria His physician then diagnosed diabetes, and stopped the glycosuria by a twenty-four hour fast He remained at work on a diet till Feb 22 1919, taking an occasional fast-day when sugar returned A well known New York consultant called by his physician at this time found his condition dangerous on account of the combination of heart disease, diabetes, nephritis and hypertension and therefore kept him in bed for eleven weeks part of the time on milk diet The milk was tolerated at first but later other low protein diets had to be substituted to avoid glycosuria The systolic pressure after this treatment remained as high as 218 mm and he suffered a slight apoplectic stroke, causing partial paralysis of the left arm and right side of the face which gradually cleared up completely The diet meanwhile had been kept very low in protein (from 30 to 50 gm), but about a month before admission an increase to 75 gm had been made for the sake of strength His tolerance meanwhile was progressively falling so that instead of the 100 gm of carbohydrate which he could formerly take in his mixed diet without glycosuria he could take only 40 gm For three weeks before admission he was kept strictly in bed on a diet of 75 gm of protein, 40 gm of carbohydrate, and 1 250 calories

Physical Examination—The patient was 5 feet 8 inches in height and weighed 115 pounds He was thin and moderately weak, but still retained fair color and cheerfulness There was no edema and no irregularity or demonstrable enlargement of the heart, the rate was 96 per minute, the radial

the diet was as usual taken without difficulty The progress up to September 1 is shown in Table 1

The salt exclusion and fluid restriction up to August 25 produced a fall in blood pressure and relief of attendant symptoms, though the blood analyses were not bettered except by a slight fall in the concentration of chlorids The nitrogen excretion was low, also the low urinary chlorids failed to show any chlorid retention in this edema-free patient sufficient to account for his hypertension The large fluid intake beginning August 25 promptly produced dizziness weakness nervousness and general malaise The increase of urine was slow and inadequate, the rise of weight indicated retention of considerable water in the body without visible edema and there were also two or three loose bowel movements daily during this period The blood pressures recorded are representative of several taken at different times each day the diurnal variation was slight In contrast to the immediate symptoms mentioned the change in the blood pressure was slow August 28 the pulse pressure was surprisingly and somewhat alarmingly small thereafter the pressures rose The fall in the blood urea and chlorids may be ascribed partly to the transitory flushing out (less evident in the nitrogen than in the chlorids of the urine) but probably mostly to dilution though it should be noticed that such dilution did not greatly alter the plasma sugar or bicarbonate A fast-day August 31 improv[illegible]ble [illegible] partic[illegible]larly the unduly high sugar

September 1 to 9 the [illegible] of the food) was res[illegible]

increased so as to make the diet 50 gm carbohydrate and 1,500 calories Subjective symptoms were promptly relieved and the blood pressure fell slowly to 148 systolic and 115 diastolic The increase of the protein-free diet was intended to reduce protein catabolism to a minimum, and the urinary nitrogen actually fell by September 9 to the unusually low level of 1 3 gm Nevertheless, with the diminished fluids, the blood urea had risen on the same date to 63 8 mg per hundred c c, while the plasma sugar was 0 181 per cent and the chlorids 560 mg per hundred c c

After September 9, the diet was changed to 30 gm of protein, 30 gm of carbohydrate and 1,200 calories with one fast-day weekly On this program the plasma sugar gradually fell to 0 123 per cent, September 27, and 0 105 per cent, October 13, and remained normal thereafter The systolic blood pressure remained almost constantly below 160 mm though the patient was up and dressed all day and spent half of every day in light tasks in the hospital or errands outside On a few occasions of exceptional strain the systolic pressure went up for a few hours between 170 and 190 Several tests were performed with ingestion of salt as high as 10 gm daily and water as high as 5 liters, but restoration of the hypertension by this means was impossible The reason may be found perhaps in the improvement of the diabetes or perhaps in the ready tendency to diarrhea The phenolsulphonephthalein elimination was improved at the lower pressures ranging in several tests from 21 to 27 per cent in two hours On one or two days each week the fluid restrictions were relaxed and 30 gm of magnesium sulphate given for eliminative purposes With 2 gm of sodium chlorid in the diet, the final blood analysis November 24, revealed plasma sugar 0 123 per cent, plasma chlorids, 531 mg per hundred c c, and blood urea, 31 3 mg per hundred c c The chief unfavorable feature was that the diastolic pressure was never reduced below 108 and was more often about 115 mm The patient was dismissed November 24 on a diet of 30 gm of protein 40 gm of carbohydrate 2 gm of salt and 1 300 calories, at a weight of 78 pounds

TABLE 2—FINDINGS IN CASE 2

Date 1919	Weight Pounds	Diet: Protein Gm	Diet: Carbohydrate Gm	Diet: Calories	Blood: Plasma Sugar per Cent	Blood: Plasma Chlorids Mg per 100 C c	Blood: Urea Mg per 100 C c	Blood Pressure: Systolic Mm	Blood Pressure: Diastolic Mm
9/ 4	138	Fasting			0 349	580	44	220	140
9/ 5	137	Fasting			—	—	—	204	100
9/ 6	133½	Fasting			0 176	612	47	148	88
9/ 7	130¾	(whisky)		210	—	—	—	152	90
9/ 8	129½	(whisky)		588	—	—	—	172	92
9/ 9	128¼	0	20	160	0 125	610	76	156	90
9/10	128	0	30	390	—	—	—	145	88
9/11	127¾	0	40	790	—	—	—	154	90
9/12	—	8 0	50	1 033	0 283	616	60	148	88
9/13	128	8 0	50	1 033	—	—	—	140	100
9/14	128¼	6 5	50	296	—	—	—	152	90
9/15	128½	7 0	50	1 029	0 170	—	—	146	95
9/16	128	7 0	50	1 029	0 214	580	25	162	85
9/17	127¾	30 0	50	1 201	—	—	—	126	80
9/20	128	30 0	50	1 201	0 183	592	28	134	80
9/27	128¾	30 0	50	1 201	0 185	—	33	162	84
10/ 2	127¾	30 0	50	1 201	0 178	616	—	140	85
10/ 3	129	Fasting			—	—	—	145	90
10/ 4	126¾	37 5	40	737	0 114	576	21	172	100

At home, various unintentional mistakes occurred with the diet On visits to the hospital blood samples were taken during digestion of breakfast The worst results were plasma sugar 0 25 per cent, plasma chlorids 623, and blood urea, 112 mg per hundred c c and blood pressure 180 systolic and 130 diastolic With further experience the results have remained equal to those in the hospital It has become possible to change the fast-days to days of half or quarter diet The patient has resumed his former very light clerical occupation but can work only half time with great effort He remains entirely well subjectively except for the existing degree of emaciation hunger and weakness

Although in the majority of combined cases the diabetes or the nephritis or both are mild, this case shows that they are sometimes severe There is no serious conflict in the treatment even here The diabetes does not interfere with protein restriction for the nephritis, or salt restriction for the hypertension There is an actual problem in providing the necessary calories This is solved by undernourishing the patient to the point at which he can tolerate 30 gm of carbohydrate Incidentally, the unusually low protein ration raises the tolerance for carbohydrate With this carbohydrate it is possible to fill up the rest of the diet with fat without acidosis The relief of the hypertension relieves the heart, and the patient is capable of more exercise and work than before At the same time the weakness of diabetes and undernutrition seems not to impair the heart but is the greatest safeguard against overtaxing it, and probably without the diabetes the heart trouble would have become worse The diet is a hard one, because of the close restriction of carbohydrate, protein, total calories and salt Otherwise the patient is as comfortable as though he had diabetes alone His actual prognosis also is that of the diabetes or whichever single condition proves most dangerous, without special influence of the complications

The second patient is a woman past middle life, with moderate diabetes and nephritis, with dangerous hypertension and retinitis, but slight tendency to nitrogen retention, edema or intoxication

Case 2—This patient was No 16 in the Rockefeller Institute series and her history up to the summer of 1917 has been given elsewhere In two admissions to the Rockefeller Institute Hospital she had been observed by the diabetes and nephritis services and had been dismissed symptom-free and with a good prognosis from the standpoint of diabetes and unrelieved and with a bad prognosis from the standpoint of nephritis The last blood pressure recorded in the publication mentioned was 250 systolic 160 diastolic Subsequently the patient was somewhat careless in diet and received treatment elsewhere, in the form of dietary restriction for glycosuria and two days of bed rest each week for the hypertension The hypertension continued and there were increasing symptoms of headache weakness, dizziness and mental confusion Finally, dimness of vision due to an actively progressing retinitis forced her to apply for resumption of treatment and she was admitted to the hospital, Sept 4 1919

This admission was five years after her first diabetic treatment at the Rockefeller Institute The age was now 52 years The weight was 138 pounds about the same as at the former discharge The physical examination was essentially as before except that arteriosclerosis seemed more marked in both the radial and the retinal vessels, and the heart slightly more enlarged Its rhythm was regular the sounds very loud with a systolic murmur at the apex as before There was slight edema about equal in the face and limbs The blood pressure was 220 systolic 140 diastolic

The laboratory examination revealed moderate sugar and nitroprussid reactions in the urine slight albumin, a few hyaline casts and no blood cells In contrast to the former strong Wassermann reactions this test was now entirely negative in repeated examinations in the laboratory of Dr Cyrus Field perhaps in consequence of previous antisyphilitic treatment The plasma sugar was 0 349 per cent, plasma chlorids, 580 mg per hundred c c, blood urea 43 6 mg per hundred c c The carbon dioxid capacity was at first slightly low (53.2 per cent by volume) but rose quickly to 61 7 and remained normal thereafter A single determination of the blood creatinin by Dr Field revealed 4.2 mg per hundred c c

This treatment differed from the previous treatment at the Rockefeller Institute only in the fact that the fasting was absolute and salt was omitted from the subsequent diet. The blood pressure which was known to have been greatly elevated for more than five years, was thus reduced very quickly and easily The retinitis was also halted completely, whether

2 Monograph 11 Rockefeller Institute 1919

by relief of the diabetes or the nephritis is undetermined The patient was discharged October 23 at a weight of 125 pounds, on a diet of 50 gm of protein 30 gm of carbohydrate and 1,500 calories, with 2 gm of sodium chlorid She had received 30 gm of magnesium sulphate twice a week in the hospital with apparent benefit, and was instructed to continue this purgation at home No rigidly normal level of blood sugar was demanded because of the patient's age and her known tendency to break diet

At subsequent visits she admitted minor indiscretions in both food and salt, but has held to the diet better than usual because of fears for her eyes The worst analyses, during digestion forenoons or afternoons have been plasma sugar, 0 25 per cent , plasma chlorids 619 mg per hundred c c , blood urea, 39 6 mg per hundred c c The best have been

sion which is resistant to these measures and to rest treatment sometimes yields readily to salt privation

The third patient represents mild diabetes under successful control on which was superimposed a hopelessly severe nephritis, with slight hypertension and edema, but marked nitrogen retention and intoxication

CASE 3—*History*.—A man aged 46 American unmarried physicist was admitted Nov 19 1919 The father died at 70 with diabetes the mother at 68 of liver disease, a paternal aunt at 70 of diabetes One sister of the patient died in childhood another died following a cesarean section sugar being found in the urine after this operation The entire family were obese The patient had had as the only

TABLE 3—FINDINGS IN CASE 3

		Diet				Urine						Blood			
								Albumin (Esbach)	Total Nitrogen						
Date 1919	Weight Pounds	Protein Gm	Carbohydrate Gm	Calories	Total Fluid C c	Volume C c	Specific Gravity	Gm per Liter	Gm	Sodium Chlorid Gm	Plasma Sugar per Cent	Plasma Chlorid Mg per 100 C c	Plasma CO Capacity Volume per Cent	Urea Mg per 100 C c	Notes
11/20	133½	1 0	67	641	—	1 040	1 010	2 0	—	5 60	0 150	630	45 1	10[illegible]	Salt free diet begun [illegible] a m R B C [illegible] Meyer index 1 2
11/21	—	0 5	108	1 125	250	800	1 010	1 5	—	7 20	—	—	—	—	9 a m R B C 3 400 000
11/22	133½	0 6	110	1 581	600	700	1 010	1 5	7 4	7 40	—	—	—	—	
11/23	—	0 3	115	1 613	830	540	1 012	1 7	7 5	5 70	—	—	—	—	Magnesium sulphate 30 gm
11/24	136¼	0 6	110	1 504	500	570	1 013	2 6	2 4	2 80	—	—	—	—	11 a m R B C 3,200 000
11/25	—	0 9	103	1 568	500	340	1 013	2 0	3 7	2 60	—	—	—	—	
11/26	134	0 6	101	1 554	680	320	1 013	2 5	2 5	2 00	0 19	[illegible]		62	Magnesium sulphate 30 gm 8 a m R B C 3 600 000
11/27	—	0 0	52	894	—	640	1 012	1 5	7 3	4 40	0 1	660	4 [illegible]	99	10 15 a m R B C 3 4 0 000 red cell volume 22 [illegible] creatinin 2 2 mg per 100 c c
11/28	—	3 6	104	1 698	1 500	450	1 011	1 8	3 3	3 30	—	—	—	—	Magnesium sulphate 30 gm
11/29	131¾	3 6	101	1 20[illegible]	300	710	1 010	1 4	6 7	4 90	—	—	—	—	[illegible] p m R B C 3,1 0 000
11/30	—	3 6	104	1 236	2 300	1 150	1 011	2 0	5 1	3 10	0 10[illegible]	643		58	10 a m R L C 3 [illegible] 000
12/ 1	131	3 6	104	1 236	2 300	500	1 006	0 8	—	6 70	—	—	—	—	Magnesium sulphate 30 gm
12/ 2	—	3 7	98	1 414	4 900	2 100	1 007	0 8	3 5	1 60	—	—	—	—	11 a m R B C 3,400 000
12/ 3	133	6 0	103	1 010	—	1 480	1 00[illegible]	1 0	2 5	1 70	0 144	1		[illegible]	
12/ 4	—	3 6	68	1 006	560	740	1 008	1 0	—	0 70	—	—	—	—	12 30 p m P B C 3 1,0 0 000 hemoglobin [illegible]
12/ 5	131¼	16 0	87	1 [illegible]4	1 [illegible]0	2 730	1 009	—	4 6	1 00	—	—	—	—	
12/ 6	—	15 0	112	1 268	2 320	670	1 006	—	1 4	0 60	—	—	—	—	
12/ 7	132-4	18 0	99	1 069	2 16[illegible]	2 410	1 006	1 3	4 8	1 06	—	—	—	—	
12/ 8	—	19 0	115	1 453	1 500	960	1 008	1 0	2 4	0 79	0 1 3	[illegible]4	4	62	8 p m R B C 3 1[illegible] 00 hemoglobin [illegible] per cent Index Long per 1 c c
12/ 9	131¾	12 0	96	1 504	1 300	500	1 010	—	1 8	0 3[illegible]	—	—	—	—	
12/10	—	8 0	57	829	185	670	—	—	2 3	0 41	—	—	—	—	Magnesium [illegible] 30 gm 11 a m P L C 3 [illegible] 000
12/11	—	15 0	87	794	500	6[illegible]0	—	—	2 2	0 38	—	—	—	—	
12/12	—	15 0	87	1 151	6[illegible]0	1 210	1 021	—	4 0	0 63	—	—	—	—	
12/13	1[illegible]0	15 0	87	1 151	6[illegible]0	560	1 03[illegible]	—	2 3	0 [illegible]9	—	—	—	—	
1 /14	—	8 8	105	8[illegible]0	1 000	780	1 010	1 6	3 0	0 [illegible]1	—	—	—	—	
12/15	120	8 8	105	850	1 000	6[illegible]0	1 016	1 1	2 5	0 31	0 1 4			112	M Leucocytes 1 9
12/16	—	16 0	112	1 126	750	470	1 010	1 2	1 8	0 [illegible]5	—	—		—	[illegible] P L C 3[illegible] 000
1 /17	120	26 0	89	1 514	600	820	1 009	1 0	3 6	0 60	—	—		—	[illegible] p m R L C [illegible] 000
12/18	—	2[illegible] 0	100	1 784	6[illegible]0	2[illegible]0	1 012	0 5	1 3	0 1[illegible]	—	—		—	
12/19	—	2[illegible] 0	100	1 784	650	490	1 016	1 3	2 6	0 09	—	—		—	
12/20	—	[illegible]0 0	100	1 584	700	520	1 0[illegible]0	—	2 2	0 [illegible]	—	—		—	
12/21	1[illegible]0	25 0	100	1 584	7[illegible]0	580	1 010	0	2 4	0 34	[illegible] 111			1 4	[illegible] p m P B C [illegible] 000 hemoglobin [illegible] per cent
12/22	—	27 0	122	1 701	800	840	1 011	—	4 1	0 60	—	—		—	[illegible] p m R L C [illegible] 000
12/23	120	27 0	122	1 764	800	720	1 011	1 1	2 9	0 40	—	—		—	
12/24	—	24 5	101	1 128	680	300	1 011	1 0	1 [illegible]	0 1[illegible]	—	—		—	
12/25	—	36 0	99	1 [illegible]89	8[illegible]0	800	1 010	1 0	3 5	0 [illegible]1	—	—		—	[illegible] p m R B C [illegible] 000 hemoglobin [illegible] per cent Index [illegible] per 1 c c
12/26	120	24 5	101	1 128	800	570	1 010	—	2 4	0 11	0 14			4	[illegible] a m R B C [illegible] 000 hemoglobin [illegible] per cent Index [illegible] per 1 c c

plasma sugar, 0 175 per cent chlorids, 605 mg per hundred c c blood urea 22 6 mg per hundred c c The highest blood pressure found at the time of the highest plasma chlorid was 186 systolic and 90 diastolic The lowest pressure found at the time of the lowest plasma chlorid was 152 systolic and 80 diastolic The symptoms previously associated with the hypertension now remain absent

This patient will always be as lax in diet as she dares, and the results will therefore never be ideal Treatment of diabetes and reduction of obesity sometimes suffice by themselves to reduce blood pressure, as illustrated by one striking case (No 33) in the Rockefeller Institute series This observation supports the foregoing statistical view that active diabetes creates some tendency to hypertension The present patient illustrates the fact that a hyperten-

known illness attack [illegible] unknown [illegible] time he had [illegible] rapidly so that [illegible] 37 [illegible] old [illegible] obtained in 192[illegible] had been good [illegible]

I present this [illegible] the [illegible] A [illegible] 9 [illegible] J [illegible] seven years [illegible] and ignored [illegible] or [illegible] weeks [illegible]

which result in somewhat similar curves For instance, constitutional disturbances and severe anemias can give rise to the same sort of low acid curve that the entire gastritis group can give, but the former is accompanied by simply a depression in secretion, and the latter not only by secretory depression but also by the tangible evidence of mucosal inflammation Again, there is unquestionably a form purely nervous, and finally there is a form in which the elaboration of secretion by the mucosa is intact, but in which the low acid curve is due to excessive regurgitation of alkaline duodenal secretions In other words, it is evident that widely different mechanisms can bring about similar conditions in the secretory output of the stomach

BASIC FACTS

We propose, therefore, in this paper to review briefly the subject of gastric analysis as we see it, based on the contributions from our laboratories, and attempt to outline a crude but sufficiently satisfactory system for the interpretation of gastric analysis Before we discuss the question of the analysis of pathologic curves, we would call attention to the following important facts which form a basis for the consideration of pathologic data In other words, we must have a normal standard, and a normal standard demands not only the average responses but also the limitations encountered in health

1 Gastric digestion is a series of recurring cycles in which digestive phases alternate with interdigestive phases (fasting or resting stomach) Both of these phases must be investigated in an analysis of gastric function

2 The normal fasting stomach shows a continued secretion, averaging from our studies about 50 c c, with an average total acidity of 30 and a free acidity of 18 We would place as the outside limit of total acidity 70 and the outside limit of the free acidity as 50, although these figures, or rather limitations, may have to be altered There should be no gross food retention, no pus or blood, and only traces of gastric mucus Bile is present in more than 50 per cent of cases and trypsin in practically all, indicating a tendency toward regurgitation during this period

3 The digestive phase in health varies with the type of the individual, whether hypersecretory, isosecretory or hyposecretory, all of them being adequately described in contributions on this subject, and also according to the nature of the meal In normal individuals 74 per cent of the beef experiments showed an acidity of 100 or more, while only 22 per cent of the egg cases, 44 per cent of the responses on milk and cream, 19 5 per cent of the vegetables, and 7 3 per cent of the bread and cereals gave an acidity of 100 or over If, therefore, the average acidity of beef was 120 and vegetables only 70, it is safe to assume that a series of figures which represented the test meal responses for beef must be very different from those obtained on eggs, those on milk, and finally those obtained with toast and tea

4 The gastric curve is clearly made up of psychic and chemical secretions, both definable by separate laboratory procedures Today we can accurately measure the psychic secretion, the chemical secretion, the continued secretion in the fasting stomach, and the amount of duodenal regurgitation

5 Hypersecretion is a phenomenon seen in about 40 per cent of normal individuals

EXAMINATION OF THE STOMACH

Therefore, it follows that with the foregoing facts clearly established, we are ready to examine the stomach from several different angles

1 A test meal to demonstrate the maximum acid output is obviously most readily administered in the form of 100 gm of beef which in health shows an average total acidity of 120 and an average evacuation time of two hours and thirty-five minutes in the rapid emptying type, and three hours and twenty-five minutes in the slow emptying type

2 Motor function may be demonstrated as above, or far more satisfactorily by means of the simple Ewald meal, with limitations given below

3 To demonstrate pathologic products from the gastric wall, the water meal used in our early work and later proposed by Austin is a gastric stimulant and has the advantage of showing any abnormality in gastric output

4 The psychic secretion is obtained for sight, taste and chewing of food by introducing the fractional tube and performing these several steps preferably with 100 gm of chopped meat, allowing the subject with the tube in situ to see, smell and taste the cooking beef

5 A pure chemical curve may be obtained by injecting the meal through the tube

6 Test meals to reveal specific factors, such as soluble albumin are those in which this substance is reduced to a minimum, as in the Ewald meal

ANALYSIS OF GASTRIC FUNCTION

For the purposes of ordinary analysis, however, we clearly want to get information from two separate standpoints one as to gastric function, the other as to the specific evidence of gastric disease, namely, the demonstration of histologic, chemical or bacteriologic evidence of disease For the purpose of functional analysis—which is not specific analysis and must not under any consideration be construed as such—we require a fixed standard and an exact knowledge of normal function We shall never be able to correlate gastric findings with a diversity of test meals While meats, fish and milk give the highest acid values, breads, cereals, fruits and then vegetables give the lowest normal values Only six cases out of eighty-two experiments on bread and cereals[2] gave an acidity of 100 or over, indicating that the average output for bread is comparatively low, but emphasizing nevertheless that high acid figures occur in health, and that high acid figures are less important from a pathologic standpoint than low acid figures But one thing is clear High acidity is of far more significance with bread and cereals from a pathologic standpoint than it is with meats and animal proteins

The simple Ewald meal of 35 gm of toast and 240 gm of water or tea appears to us as the simplest meal, and the double advantage of inducing a moderate acidity with rapid evacuation time We can, therefore, accurately delimit the evacuation time or the measure of motor function An Ewald meal in health is evacuated in from two to two and one-half hours Anything at one hour and one-half or less, or more than three hours, can be considered outside the normal boundary lines In health we encounter slow and rapid stomachs, but only rarely we encounter figures in excess or below these limitations We would,

2 Smith Fowler Bergeim Rehfuss and Hawk Unpublished data

therefore, from a motor standpoint divide all pathologic responses into two groups (barring a third pathologic group giving normal evacuation time) one with too rapid evacuation time or hypermotility, and the other with too slow evacuation time or hypomotility From a study of the clinical cases of one of us, we have found that hypermotility can be ascribed to four causes (1) a group of subacidity and achylia cases, (2) a very small percentage of duodenal ulcers, (3) a form of scirrhous carcinoma converting the pylorus and antrum into a funnel, and (4) a group due simply to peristaltic overaction, including those very motile stomachs which the French have called "gastric chorea"

From the standpoint of delayed evacuation or hypomotility, we have both intragastric and extragastric causes, the slight delays being found most frequently with gastric myasthenias, atonic stomachs, and muscle defects beginning dilatation, while the marked delays are due to intragastric causes, such as contracting pyloric ulcer, carcinoma of the pylorus, hypertrophic pylorus, benign tumors in that region, pylorospasm, gastric syphilis of the stenosing type, contracting ulcer of the lesser curvature with organic biloculation, and as extragastric causes adhesions to the pylorus and duodenum, tumors interfering with gastric evacuation, such as tumors of the head of the pancreas

SECRETORY VARIATIONS

From a secretory standpoint, with this meal we have every variation, from exaggerated secretion or hyperacidity and hypersecretion to subacidity, anacidity, achylia and delayed gastric acidity In practically every case, the variations in the secretory output can be placed in four categories (1) nervous, (2) circulatory, (3) mucosal, and (4) a disturbance of the tryptic regurgitant mechanism

We prefer, therefore, in the analysis of the secretory curve to divide all gastric secretory curves into four groups, depending on whether or not they are associated with definite evidence of diseased gastric states For purposes of analysis, one might divide all gastric responses in disease into four groups (1) clean digestion, simple secretory variations, (2) secretory variations plus gastric mucus, indicating inflammation of the mucous membrane, (3) secretory variations plus blood (intragastric), indicating ulceration of the mucous membrane, and (4) secretory variations plus blood, pus, mucus and bacteria, indicating ulceration and infection of the mucous membrane

Group 1 A clean digestion (and by that term we mean no evidence of mucosal irritation or disease), whether there be functional alterations or not, indicates in the presence of gastric symptoms that conditions outside the stomach are responsible for the gastric response, and that the latter is usually a secondary manifestation For instance, a larval hyperacidity may be encountered in psychic disturbances, or a digestive or postdigestive hyperacidity or hypo-acidity may be encountered, in which case the ultimate analysis will usually reveal factors outside the stomach inducing secretory changes It is this clean group which is so frequently encountered in certain biliary disturbances, appendical disease, abdominal adhesions, etc The assumption is that most frequently the effect is produced over nervous pathways and less frequently through the circulation Clean subacidities and achylias are encountered in metabolic conditions, such as gout, thyroid disease, pellagra and almost any toxic condition which inhibits the vagus or stimulates the sympathetic, or through the circulation produces direct inhibition of the gastric mucosa This is particularly true of those types associated with focal infections and anemias

Group 2 A secretory variation with the addition of a pathologic element immediately introduces the element of a gastric pathologic condition The commonest pathologic element is gastric mucus which must be differentiated from swallowed mucus The definite and persistent presence of this element immediately introduces us to a very large group—the gastritis group There are many varieties in fact, some time ago one of us was able to collect more than 200 causes of chronic gastritis induced in a variety of ways—direct irritants representing the whole line of dietary indiscretions and food infections, the great group associated with irritants carried by the blood stream, and a third group in which the chronic inflammation was secondary to diseased conditions occurring in most of the body viscera By widely different mechanisms, these factors are able to produce similar lesions

Group 3 In this group there is the addition of blood to secretory variations (meaning intragastric and not swallowed blood) Blood in the stomach means ulceration whether it be minute hemorrhagic erosions, acute ulceration multiple erosions or chronic round ulcer, or whether it means ulceration or a neoplasm, such as carcinoma or gumma While it is true that a certain proportion of gastric ulcers do not bleed, nevertheless the continued presence of this fluid immediately indicates the element of ulceration We have seen stomachs at operation which revealed blood and no visible spot of ulceration, nevertheless there was intense congestion In our series of ulcers, only 38 per cent showed high acidities, and 30 per cent, comparatively low acidity With ulcer of the duodenum an almost pathognomonic finding is blood with tryptic regurgitation or bile, and only at those periods

Group 4 This is the group in which there is unquestioned evidence of infection and inflammation of the mucosa In other words, the presence of blood, pus, mucus and bacteria indicates ulceration, inflammation and infection of the stomach, and we have found this syndrome in only three conditions true infected gastritis, gastric carcinoma, and gastric syphilis With the exception of rare forms of acute and phlegmonous gastritis, the presence of one of these three can be surmised if it can be demonstrated that these factors are intragastric and not extragastric or swallowed The latter is discrete and does not persist throughout the curve while the gastric material will be found throughout digestion and particularly toward the end of digestion

The fact that alterations of the gastric secretion with persistent mucus content indicate gastritis by no means ends the investigation As we have pointed out an investigation must be made as to the correlated causes likely to induce such a disturbance The analysis of the subacidity acidity achylia and delayed digestion curves demand, therefore, a careful study of all the associated factors

INTERPRETATION OF GA[illegible]RES

Our idea is simply to pro[illegible]
the study of gast[illegible]

functional data, such as the type of secretory curve and the evacuation time, does not make a diagnosis, but it constitutes evidence which, when correlated with other factors above mentioned and the general summary of the case, is of the greatest importance Every gastric curve is a sum total of a series of factors which must be critically analyzed It is a mistake to put the cart before the horse and say that because so many cases of gastric ulcer reveal hyperacidity, a hyperacid curve is indicative of ulcer Gastric ulcer can and does occur with a normal secretory and motor mechanism, and, so far as we can demonstrate, no functional variation, a point which is simply another link in the chain of evidence to indicate that certainly some forms of ulcer have neither secretory nor motor variations as etiologic factors, but some other cause, probably toxic, to explain their presence Gastric cancer in its inception must exist with little or no demonstrable change in function Gastritis induces changes in function, and as such they are readily demonstrable, and the whole line of muscular disturbances induces changes in evacuation which are readily demonstrable Let us realize here and now with gastric analysis as with the roentgen ray that neither lies but that it is our interpretation which is faulty We found out long ago that we could not make our analytic findings fit our preconceived notions of what the case ought to show The attempt to trace the gastric responses in many of the diseased conditions is laudable, but more laudable is the attempt to analyze in a given case the factors that have brought about such a change

CONCLUSIONS

In the present state of our knowledge the following assertions seem justifiable

1 Gastric analysis is either functional or specific, and in both fields it has its limitations The fractional analysis of a test meal is an exact determination of secretory and motor function, and the results of these two studies can demonstrate only alterations in function Functional alterations may be functional or organic in origin To the analysis of motor and secretory function should be added the demonstration of specific pathologic elements, such as blood, pus, mucus and bacteria Only the evidence of cancer cells or the persistent presence of pathogenic infecting organisms can be considered pathognomonic

2 The interpretation of gastric analysis presupposes a knowledge of the normal gastric output This is now well defined for both the periods of gastric activity and rest These normal variations are given above The secretory normal response can be divided into three types, but in disease any variation can occur Disease may alter either the digestive or interdigestive curve or both, it may alter function and it may add its specific elements to the sum total of gastric work

3 There is no pathognomonic curve in any gastric condition There is no pathognomonic curve in gastric cancer, ulcer, the inflammations or, for that matter, any of the gastric conditions We can only say that it may, and usually does, produce definite types of secretory and motor alterations and definite forms of pathologic elements

4 A sane view of this subject is urgently necessary, and, most of all, is needed constructive work on the factors which induce alterations in function, as well as the isolation and demonstration of those pathologic elements which indicate a true gastric pathologic condition Nowhere else is this so essential as in the study of gastric carcinoma

5 We must have clearly defined the variations in health factors which we have attempted in our laboratories and already indicated on studies in beef, pork, lamb, milk, eggs, vegetables, and in articles shortly to appear on the effect of the entire line of foodstuffs on normal gastric digestion

This paper is presented in the hope that it will suggest a basis for the logical interpretation of gastric findings

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THE COAGULATION TIME OF BLOOD IN THE NEW-BORN

WITH ESPECIAL REFERENCE TO CEREBRAL HEMORRHAGE *

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Interest in this subject was awakened by necropsy findings on infants from the New Born Clinic, University of Minnesota Statistics from our clinic show that postmortem examinations reveal cerebral hemorrhage in more than 50 per cent of all infants that die intra partum or during the first few days of life It was notable that these findings often were made following nonmstrumental or even easy deliveries They were especially frequent following breech presentations and in premature births Case 2, twins, was an illustration of this The first, delivered by forceps, showed no cranial complications, the second, smaller and easily delivered by version and extraction, died of cerebral hemorrhage (Case 2) The factor of asphyxia neonatorum to which Little,[1] Cushing[2] and others ascribe the cerebral damage was not always present It was further noted that at necropsy the blood was often found only slightly coagulated or even fluid

Historically, there are three landmarks which indicate the progress in our knowledge of cerebral hemorrhage in the infant Little, in 1861, was the first to call attention to the relationship of what he termed asphyxia neonatorum following difficult or instrumental deliveries to mental and physical defects that developed later—mental deficiencies and spastic states The classical studies of Sarah McNutt[3] in 1885 showed that cerebral hemorrhage was the specific cause of these lamentable conditions Cushing's bold pioneer work in 1905 demonstrated that craniotomy with removal of the clot was a feasible procedure and a preventive of subsequent cerebral degeneration with its sad and irremediable train of symptoms

The great frequency of cerebral hemorrhage has not been fully realized, and the etiology still remains obscure Old theories of asphyxia and injury from forceps might explain the occurrence only in part Dealing with this interesting problem, one finds a very

* Read before the Section on Diseases of Children at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Little W J Tr Obst Soc London 3 293 1861

2 Cushing Harvey Concerning Surgical Intervention for the Intracranial Hemorrhages of the Newborn Am J M Sc 130 56, 1905 Keen W W Surgery Its Principles and Practice Philadelphia W B Saunders Company 1908

3 McNutt S J Double Infantile Spastic Hemiplegia with the Report of a Case Am J M Sc 89 58 (Jan) 1885 Intracranial Hemorrhage in Children New York M J 41 104 1885

considerable literature during the last two decades Warwick[4] gives a comprehensive summary, and emphasizes the great frequency of this lesion in the new-born Weyhe[5] gave his percentage of cerebral hemorrhage in 950 necropsies on the new-born as 12, Beneke,[6] on 100, as 14, Archibald,[7] on 73, as 43, Warwick, on 36, as 50, and Parrot,[8] on 34, as 76 We believe that complete routine necropsies will prove that the figures of the last two writers are not exaggerated Cerebral hemorrhages are found when least expected A case of congenital heart lesion with transposition of the viscera (Case 6) gave no symptoms of hemorrhage except prolonged coagulation and bleeding times, but necropsy demonstrated a large hemorrhage over the cerebrum The figures quoted show unquestionably that by far the most frequent cause of death in the new-born is cerebral hemorrhage If Little and McNutt were correct in the assumption that intracranial hemorrhage is the most frequent cause of spastic birth palsies, the thousands of these patients drifting about in search of relief add further proof of the frequency of cerebral hemorrhage

The more rational and in part demonstrated theories as to etiology may be briefly stated Beneke believes that the hemorrhage is due to the stretching and tearing of the tentorium resulting from elongation of the skull Cushing ascribes as one cause the rupture of veins over the vertex from overriding of the cranial bones In a second, he concurs with Little and Abels[9] that rupture of veins occurs as a result of congestion and backing up of blood in the cerebral vessels Seitz,[10] in an exhaustive study, gives three causes (1) rupture of the longitudinal sinus or veins emptying into it with blood collecting over the cerebrum, (2) rupture of the transverse sinus or tearing of the tentorium and release of blood over the cerebellum, and (3) rupture of vessels of the choroid plexus with accumulation of blood in the ventricles

Henschen[11] believes that by far the most frequent site of intracranial hemorrhage is over the cerebrum, over the parietal area and often limited to one side Seitz and Cushing give as the reason for this the anatomic relations There are from ten to twelve veins (from four to six of goodly size) extending from the subarachnoid space to the superior longitudinal sinus, which they enter at right angles under cover of the parietal bones In the adult at the points of entrance occur the pacchionian bodies which afford support to these veins These bodies are absent in the new-born, so that minimal trauma is capable of destroying continuity of these vessels Compression and distortion of the skull by instruments, or even the molding of a normal labor, might readily rupture these vessels Further, the frail vessels and compressible head of the premature infant might account for the rather striking frequency of cerebral hemorrhage in the premature infant

Massive hemorrhages in the stillborn or in infants that die in the first hours of life probably result from the rupture of large veins sinuses or tears of the tentorium Seitz's studies on frozen sections of the skull would seem to support this deduction

There remains, however the majority of the cases of cerebral hemorrhage developing insidiously and not until several days after birth causing symptoms of increasing intracranial pressure convulsions and death In these cases, necropsy reveals a large clot with a thick center, thin edges usually unilateral and covering the parietal area There is no demonstrable source of hemorrhage—no torn veins or rents in the sinuses But further examination will show multiple hemorrhages throughout the body in locations where it is hard to conceive of trauma from normal birth forces or obstetric procedures

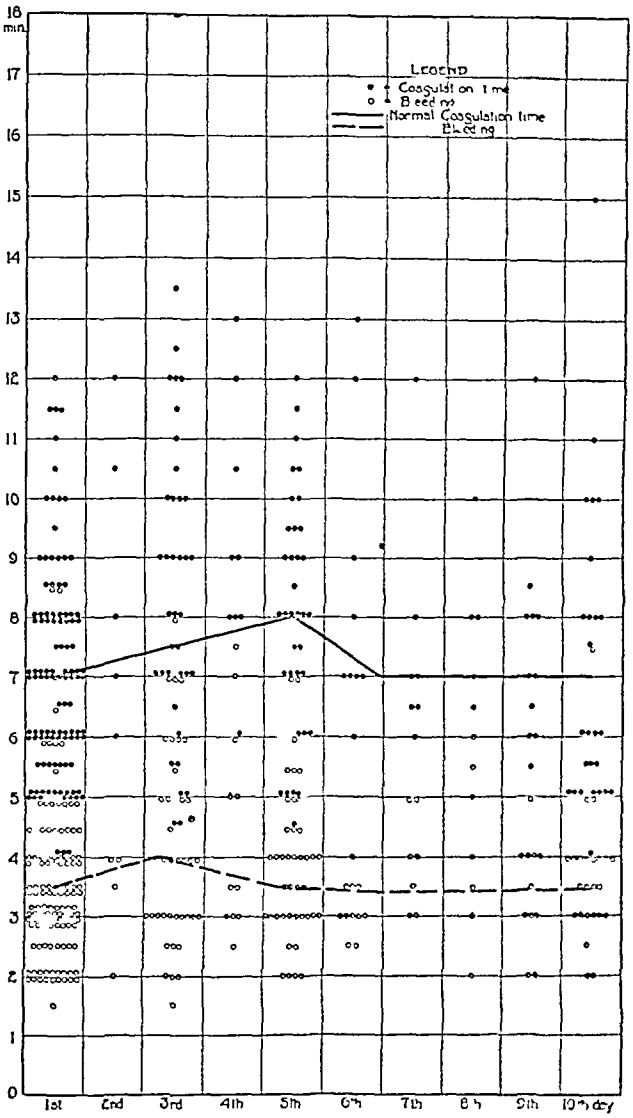

Chart 1.—Determinations of coagulation and bleeding time on various days of first ten

ILLUSTRATIVE CASES

CASE 1 (No 14915).—*History.*—A girl born to a primipara was born by easy breech delivery During life there was no evidence of sepsis The temperature curve was normal Cyanosis shallow irregular breathing bulging fontanel protracted crying contracted pupils blood, spinal fluid prolonged bleeding, from [illegible] cure,

4 Warwick Margaret Cerebral Hemorrhage of the Newborn Am J M Sc 158 95 (July) 1919
5 Weyhe Ueber die Haufigkeit von Hemorrhagien im Schadel bei Saugligen Inaug Diss Kiel 1889
6 Beneke Tentoriumzerreissungen bei Geburt Munchen med Wchnschr 57 2125 1910
7 Archibald Am J Pract Surg 51 208 1908
8 Parrot Union med No 11 1870 quoted from Warwick
9 Abels Zur Genese und Symptomatologie intrakranieller Blutungen bei Neugeborenen Arch f Gynak 99 1 1913
10 Seitz Ueber Hirndrucksymptome bei Neugebornenen in Folge intracranieller Blutungen und mechanischer Hirnmsulte Arch f Gynak 82 528 1907
11 Henschen Zentralbl f Gynak 37 925 931 1913

emesis of blood, a rapidly growing cephalohematoma, and a large subcutaneous hemorrhage over the lumbar region were followed by death on the sixth day

Necropsy Findings—Blood ran from the nose There were subcutaneous hemorrhages over the chest, arms, back and occipital region Blood was present in the abdominal muscles and under the peritoneum, free blood was found in the pericardial cavity, under the pericardium and in the bronchial tubes There was profuse hemorrhage into the lung tissue, and there were massive hemorrhages over the temporal and occipital lobes No source of bleeding was found

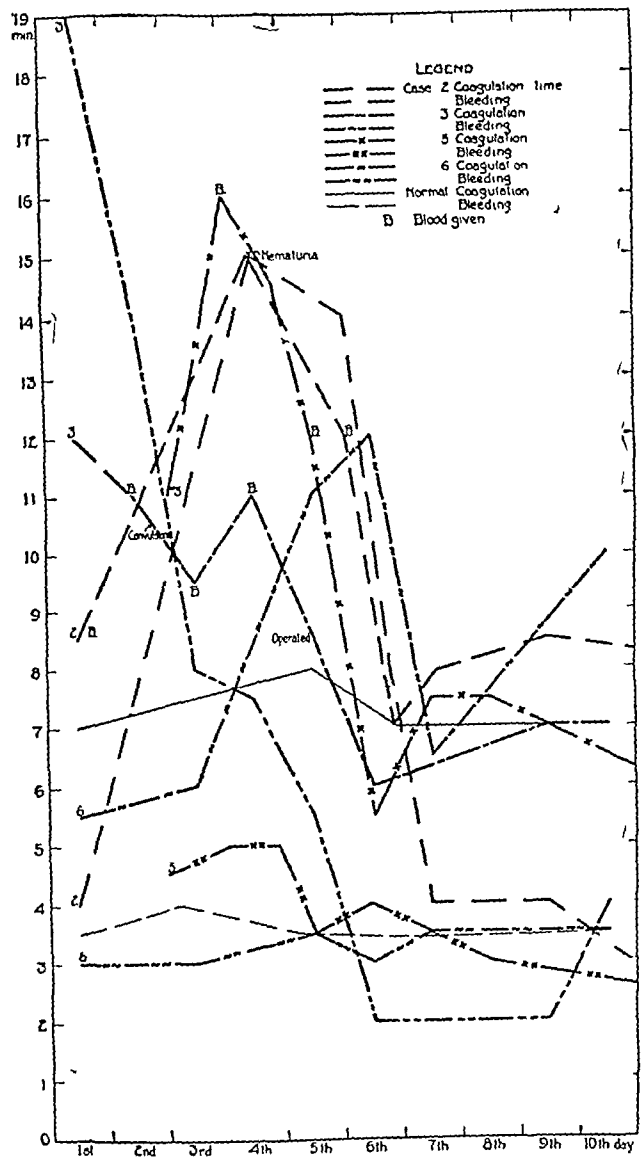

Chart 2—Coagulation time in a series of cases above the normal range

CASE 2 (No 16178)—*History*—L, girl, the second twin, the first delivered with forceps without evidence of trauma, this one delivered by version and later presenting unequal inactive pupils, bulging fontanel and spasticity of limbs, died on the fifth day

Necropsy Findings—A very large hemorrhage into pericardial sac and about the vessels of the neck was found Hematoma of the scalp hemorrhage into the lungs and a massive hemorrhage over the right cerebrum were noted

CASE 3 (No 8463)—*History*—R, boy, born after normal labor showed signs and symptoms of cerebral hemorrhage and died on the third day

Necropsy Findings—There was hemorrhage into the heart, lungs and skin as well as a subdural hemorrhage

CASE 4 (No 14597)—*History*—P, girl a premature infant born after a very easy labor, with no sign of syphilis, died on the second day

Necropsy Findings—There was extensive hemorrhage into the lungs and brain

More than 25 per cent of all our cases posted show this picture of multiple hemorrhages Careful analyses of cases reported in the literature by Cushing, Green and others will permit one to duplicate these findings many times

From these findings, it was concluded that there were factors other than instrumentation and trauma concerned in cerebral hemorrhage, and that perhaps the obstetrician was carrying some burdens unjustly laid upon him Concomitant symptoms of hemorrhagic disease during life, with the demonstration of multiple hemorrhages at necropsy, suggested further studies on the etiology, and especially on the question of disturbances of the coagulation properties of the blood in the new-born Credit must be given to Green,[12] who, in 1914, first suggested this factor I therefore undertook studies on the coagulation time of the blood in patients giving evidence of cerebral hemorrhage

GENERAL OBSERVATIONS

An account of the method used and the results obtained has already been published[13] Certain general observations which were made may be helpful in the present study (Charts 1 and 2)

1 The average coagulation time in the normal newborn, with my method, is seven minutes, with a normal range of from five to nine minutes, the average bleeding time, with Duke's method, is three and one half minutes, with a normal range of from two to five minutes

2 There is a prolongation of coagulation and bleeding times from the first to the maximum on the fifth day of life, with a return to the average first day determination time before the tenth day It is significant that this coincides with the age incidence of hemorrhagic disease and cerebral hemorrhage

3 Evidence of hemorrhages appeared when a prolonged bleeding time accompanied a delayed coagulation time

4 Delayed times were favorably affected by the subcutaneous administration of whole blood

For their relationship to the problem in hand the results obtained in certain conditions of the new-born may be cited

1 In icterus neonatorum normal coagulation and bleeding times were found

2 No cases of sepsis neonatorum were presented for study

3 Several cases of melena neonatorum gave markedly prolonged coagulation times—up to ninety minutes—and bleeding times of hours, days or until the condition was controlled Schloss and Commiskey,[14] in their studies, obtained similar results in some of their cases Symptoms were relieved, and the reactions returned to normal with repeated injections of blood

4 Suspected and mild cases of congenital syphilis gave normal findings Severe and progressive cases

12 Green Intracranial Hemorrhage in the Newborn Boston M & S J 174 947 1916

13 Rodda F C Studies with a New Method for Determining the Coagulation Time of the Blood in the New Born Am J Dis Child 19 269 (April) 1920

14 Schloss O M and Commiskey L J J Spontaneous Hemorrhage in the New Born Am J Dis Child 1 276 (April) 1911

gave prolonged times Further, though a temporary reduction in the times could be obtained by the administration of blood, it was not permanent, and one patient died of hemorrhage in spite of repeated injections of blood subcutaneously and into the superior longitudinal sinus This result was quite contrary to that obtained in melena, and may be explained by the presence of some destructive agent rather than a condition of deficiency of certain substances concerned in coagulation

RESULTS IN CEREBRAL HEMORRHAGE

The results in cases of cerebral hemorrhage, which is under consideration, were rather striking (Charts 3 and 4)

CASE 5 (No 16178, Chart 3) —*History*—L, girl, a twin, born March 11, 1919 with breech delivery, was in rather poor condition at birth mouth to mouth breathing was employed March 12, the child's condition was good March 13, pallor weak pulse and unequal pupils which failed to react to light, were noted The head was pulled to the left, the limbs were spastic, the spinal fluid was blood tinged There was hematoma of the scalp The coagulation time was thirty-nine minutes The infant was given 25 c c of the mother's blood March 14 the findings were as before, with paresis of the right side of the face, the spinal fluid was bloody After standing the supernatant fluid was yellow (Xanthochromia of the spinal fluid we find to be a rather constant finding if blood is present about the base of the brain or in the upper spinal canal) The coagulation time was ninety minutes The infant was given 25 c c of the mother's blood, this was repeated March 15 Icterus and Cheyne-Stokes breathing were present The spinal fluid findings were the same as on March 14 Twenty-five c c of blood was given The coagulation time was eleven minutes The child died at 10 45 p m

Necropsy Findings—There were large hemorrhages into the pericardial sac in the lung, and over the entire right hemisphere, there were small hemorrhages over the tentorium and in the spinal canal Blood injections appeared to have controlled the coagulation time, but the child died from intracranial pressure

The twin brother had an emesis of blood on the third day The coagulation time was found to be fifteen minutes It was given 25 c c of the mother's blood The subsequent course was normal

CASE 4 (No 18583 Chart 3) —*History*—H, boy, whose mother was a primipara was born March 13 1920, with a low forceps delivery A slow fetal heart rate had been noted The child's color was good at birth, but he became cyanosed after ligation of the cord March 14 the child gave a lusty normal cry There was extreme cyanosis and no heart murmur The coagulation time was eleven minutes, the bleeding time was four minutes March 16, physical examination revealed the apex beat in the fourth intercostal space on the right nipple line The liver was palpated on the left side, the spleen on the right A diagnosis of transposition of the viscera was made The patient's condition was good except for cyanosis March 17, respiratory embarrassment was extreme, the pulse rate was 40 coagulation time, thirteen minutes bleeding time indefinite. Bleeding from the site of the puncture continued for hours No blood was given, and the patient died

Necropsy Findings—Complete transposition of the viscera rudimentary right heart with lack of the intraventricular septum and a large blood clot over the parietal region were found During life there were no specific signs or symptoms of cerebral hemorrhage except the blood changes The slow pulse, noted before birth, and the cyanosis were attributed to the cardiac condition

CASE 7 (No 17419 Chart 3) —*History*—L M girl whose mother was a primipara was born, Oct 1 1919, with normal delivery She weighed 2400 gm October 2 the findings were normal the coagulation time was seven minutes the bleeding time four minutes October 3 and 4 there was normal progress October 5 the patient was cyanosed and Cheyne-Stokes breathing was present Hematoma over the right parietal region was noted for the first time The coagulation time was eleven minutes the bleeding time eight minutes The infant was given 15 c c. of blood subcutaneously and died a few hours later

Necropsy Findings—Hemorrhages into the tissues of the scalp with hematoma over the right parietal area were found also extensive subarachnoidal bleeding over both temporal areas with a small amount of blood over the cerebellum and in the ventricles This case presents a very late onset of symptoms apparently a slow hemorrhage

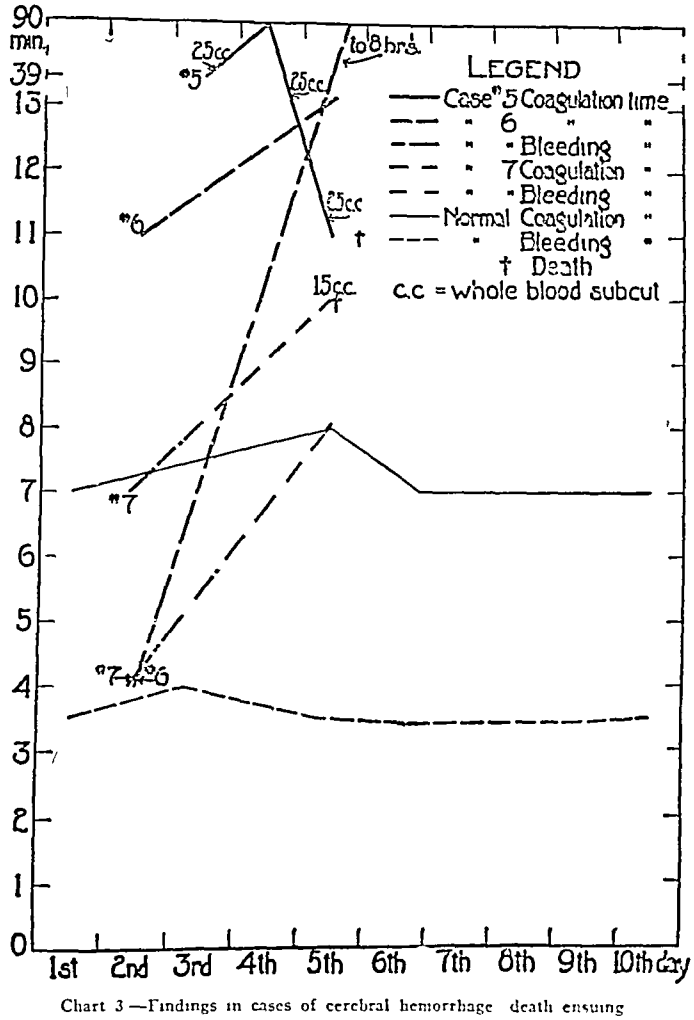

Chart 3 —Findings in cases of cerebral hemorrhage death ensuing

CASE 8 (No 16634 Chart 4) —*History*—S boy was born May 26 1919 with normal delivery after long labor May 27 a large cephalohematoma rapidly increasing in size was noted as well as petechial hemorrhages over the arms chest and abdomen There was spasticity of the right hand Twelve hours after birth the patient was given 30 c c of blood subcutaneously Seven hours later 20 c c. more blood was given The coagulation time was then four minutes the bleeding time eleven minutes May 28 the coagulation time was four minutes the bleeding time four and one half minutes The patient had convulsions The spinal fluid was bloody the coagulation time was four minutes the bleeding time seven minutes May 29 the findings were the same the coagulation time was seven minutes the bleeding time ten minutes The patient was given 22 c c of blood May 30 operations performed by Dr A C Strachauer A la

was turned down and a blood clot removed There was slight oozing from the wound The patient was given 25 c c of blood May 31, the condition was as before operation except for lack of convulsions June 1, spasticity was clearing, the coagulation time was five and one-half minutes, and the bleeding time, six minutes June 6, there was continuous improvement The blood reaction times were normal

Present Condition—The patient was seen at 10 months, he appeared to me a normal baby, though the head was rather large

CASE 9 (No 17750, Chart 4)—*History*—H, girl, was born Nov 20, 1919, with breech presentation, version and extraction

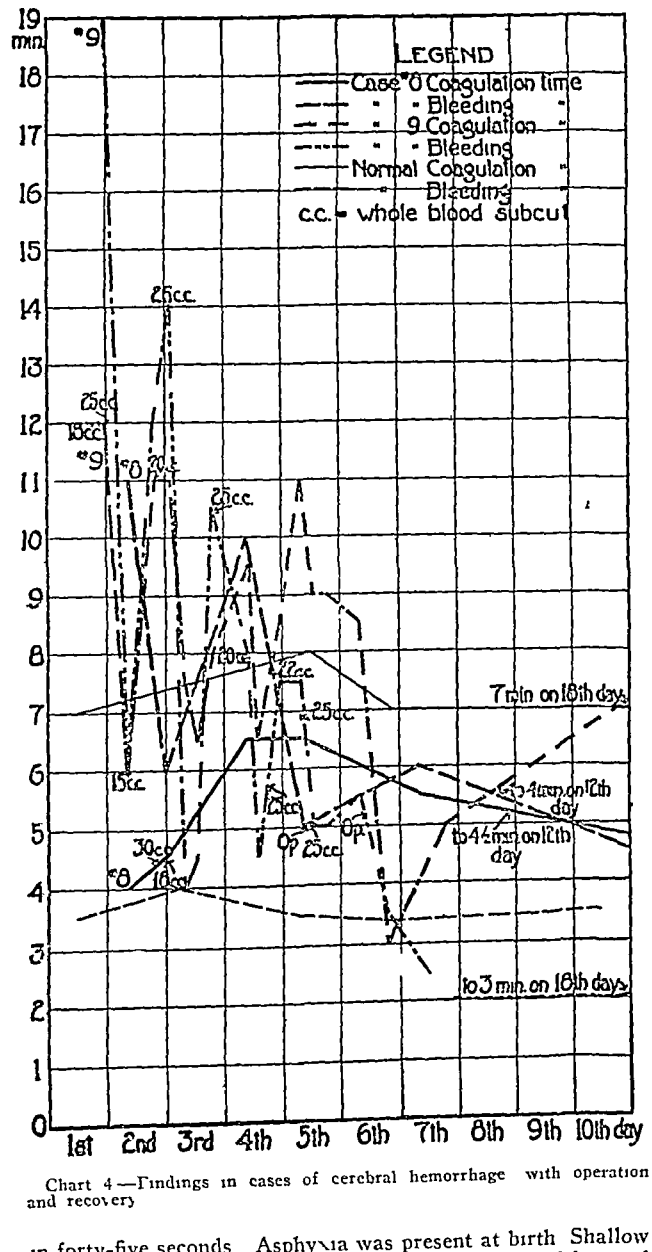

Chart 4.—Findings in cases of cerebral hemorrhage with operation and recovery

in forty-five seconds Asphyxia was present at birth Shallow breathing, overriding of parietal bones and bulging of fontanel were noted The patient was given stimulants The coagulation time was twelve minutes, the bleeding time, nineteen minutes The patient was given 43 c c of blood November 21, the general condition was better except for pallor The coagulation time was six minutes, the bleeding time, six minutes Fifteen c c of blood was given November 22, the patient had convulsions, she was given 25 c c of blood twice during the day November 23, she had convulsions from every five to fifteen minutes, with sharp piercing cries The coagulation time was six minutes the bleeding time, ten minutes Twenty c c of blood was given Later the patient was given 25 c c November 24, the patient had difficulty in swallowing There were no localizing symptoms The coagulation time was eleven minutes, the bleeding time, seven and one-half minutes Twenty-five c c of blood was given, November 25, 25 c c of blood was given The coagulation time was eight and one-half minutes, the bleeding time, five and one-half minutes A decompression operation was performed by Dr A C Strachauer His notes state "On incising dura, brain bulged, great pressure, bleeding possibly on other side" After operation, the coalugation time was three minutes, the bleeding time, three and one half minutes This striking reduction in time almost immediately after operation may have to do with intracranial manipulation with the release of cephalin November 26, the patient was much improved, the coagulation time was six minutes, the bleeding time, two and one-half minutes The patient was discharged on the twenty-seventh day in excellent condition showing a gain of 800 gm over the birth weight

Present Condition—At 4 months she weighed 14 pounds and appeared perfectly normal

COMMENT

Cases 8 and 9 illustrate the brilliant results of surgery It may also be concluded that the early and repeated injections of blood controlled the tendency to hemorrhage and contributed to the surgical success

Analyses of these cases show that administration of blood subcutaneously is capable of bringing the blood coagulation reaction back to normal This in certain cases may be curative, especially if resorted to early It may be a necessity if surgery is contemplated, for early operation in the face of uncontrolled hemorrhagic tendencies is a great risk Otherwise, late operations after eight or ten days may be undertaken if the child survives to this time, since the blood reactions are then usually normal

Bulging fontanel, respiratory and cardiac disturbances, spasticities and convulsions, the classical signs of cerebral hemorrhage, may present themselves late in the disease or not at all Prolonged coagulation time and a protracted bleeding time suggest the disturbance It is now a routine in our clinic to determine these factors early and to administer blood repeatedly if delay is found

It seems justifiable to conclude that the etiology of cerebral hemorrhage is complex

(*a*) Severe trauma with resulting rupture of large veins, or sinuses, or tearing of the tentorium produces massive hemorrhages with death at delivery or within the first few hours

(b) Mild trauma may produce hemorrhages also, but the condition of the new-born blood enters into consideration

1 If the coagulation and bleeding times are normal, recovery may take place Kundrat,[15] in necropsies on children several weeks old in whom cerebral hemorrhage had not been suspected, reported blood pigment and signs of old hemorrhage

2 If the blood shows prolonged coagulation and bleeding times, hemorrhage may be progressive over days until intracranial pressure is increased to the extent of producing symptoms, and if longer continued and not relieved, death ensues

Hemorrhagic tendencies in the new-born may be latent until an abrasion of the skin, opening of a hematoma, the forcible removal of the cord, or circumcision gives occasion for protracted bleeding Likewise the rupture or break in some small vein over the brain surface supplies the impulse for the hemorrhage,

15 Kundrat Ueber die intermeningealen Blutungen Neugeborener Wien klin Wchn chr 2 887 1890

if the hemorrhagic tendency is present In our work, it was found in hemorrhagic conditions that the bleeding point was often occluded by a soft clot—movement of the limb or contact with bedding often displaced the clot and induced a fresh hemorrhage Such a clot in a cerebral vessel could easily suffer dislodgment from crying or vomiting, with renewal of the bleeding This explains the protracted steplike progress seen in many cases of cerebral hemorrhage

CONCLUSIONS

1 Cerebral hemorrhage is a frequent occurrence in the new-born, and the most frequent cause of death in the first days of life

2 Cerebral hemorrhage is not always caused by obstetric operations, it may follow normal labors when least expected

3 Severe trauma results in massive hemorrhages and early death

4 A more frequent cause of cerebral hemorrhage is mild trauma plus hemorrhagic disease of the newborn, accompanied by findings of delayed coagulation time and prolonged bleeding time

5 A delayed coagulation time and prolonged bleeding time can be controlled by the subcutaneous injection of whole blood This is a rational therapy in cerebral hemorrhage

6 In severe cases, surgery should be employed early, operation should be controlled by blood studies and the injection of blood if indicated

7 The coagulation time and bleeding time should be determined in every new-born presenting unusual symptoms, or better, as a matter of routine If reactions are delayed, blood should be administered

The Children's Clinic, 1717 First Avenue, South

ABSTRACT OF DISCUSSION

DR ISAAC A ABT Chicago We are accustomed to think of meningeal hemorrhages in the new-born as the result of trauma, and we frequently blame the obstetrician for the damage when he is not responsible The most frequent causes of meningeal hemorrhage have already been mentioned We frequently encounter cases in which meningeal hemorrhage results on the fourth or fifth day and I have thought that this was due to a trauma during labor Dr Rodda pointed out however that the hemorrhage may occur as the result of a constitutional state or on account of the fragility of the blood vessel walls Dr Rodda has established a normal coagulation time for the blood of the new-born infant and also worked out the normal bleeding time He has shown conclusively that a certain number of babies bleed without having received any birth injury Babies with meningeal hemorrhage bleed slightly at first though later on a continuous oozing occurs leading to the accumulation of a considerable quantity of blood If we detect a tendency toward bleeding, or if we recognize the fact that oozing is going on, by Dr Rodda's method of determining the coagulation time we will be able to control the hemorrhage Considering the severity of these cases particularly the after effects on the nervous system localization of the hemorrhage should be attempted and surgical treatment should be advised If nothing else can be done a decompression may be produced by operation and possibly the severe results of pressure on the cerebral cortex and the destruction of cells with subsequent degenerative processes may be prevented Of course, there are those who will say at once that there is sufficient decompression already on account of the natural structure of the infant's skull, but when there is continued oozing the subarachnoid space soon becomes distended, the dura may be incised so as to prevent this overfilling and to relieve compression

DR JOHN FOOTE, Washington, D C The work Dr Rodda has reported on is extremely important, particularly so in view of the observations made by Ballantyne of Edinburgh on the influence of the neonatal death rate on the general infant mortality rate We have here the condition which necropsy findings have shown to be the cause of perhaps 50 per cent of deaths in the new-born within the first few days of life That has been the result of Dr Warwick's observations at the University of Minnesota and by Wehe and Kundrat who have done similar work Not only that, but this condition has been found in routine necropsies on a large number of infants in whom none of the classical symptoms of cranial hemorrhage had appeared So we can realize its great importance Dr Rodda has standardized the method by which we may obtain definite knowledge within reasonable limits of the normal coagulation time of infants' blood I have been impressed with the importance of this subject for a long time Three years ago, in discussing Dr Brady's paper I stated that in my opinion hemorrhage within the cranium of infants could be and frequently was the result of a general hemorrhagic tendency I have sometimes found it necessary to use thromboplastin or horse serum or blood to induce coagulation I have obtained very good results with other agents than blood Some men do not care to use human blood unless they have the proper hemisoagglutination group of donor Whenever I think of that term I am reminded of what George Eliot said that we cover up our ignorance with long Greek names" Whole blood may be injected under the skin regardless of grouping rules

DR HOWARD B HAMILTON Omaha We need to remember not only the frightful mortality attendant on this condition but also the frightful morbidity When we see these children later with their deformities of a physical or mental and perhaps even of a moral character it gives us food for thought I have seen some cases due to the use of pituitary extract The unfortunate results whether those of mortality or morbidity are such that extreme measures are justified If there are localizing symptoms it seems more than justifiable to operate If there are those cases which give evidence of pressure but without localizing symptoms some one has suggested the utility and the feasibility of doing repeated lumbar punctures and has reported some cases in which benefit was obtained by so doing Some one advised going into the cisternae at the base of the brain through the foramen magnum which seems to be rather a formidable procedure but if there is any hope of doing anything for these patients it would be justifiable because the results otherwise are of such an unfortunate character that it would seem better to lose the patient with an unsuccessful operation than to have him live in the condition in which many of them are left

DR F C RODDA, Minneapolis We were greatly impressed with the frequency of cerebral hemorrhage in the new-born In our studies of more than fifty necropsies over half of them showed cerebral hemorrhage We were at a loss to explain why hemorrhages were so frequent following normal labors why there was delay in the onset of symptoms as long as five or six days and why they frequently accompanied multiple hemorrhages throughout the body In our studies in determining the coagulation time we found repeatedly in hemorrhagic cases that the puncture point in the heel was closed with a very soft clot This was easily displaced by movement of the limb and bleeding frequently recurred We feel the situation is somewhat similar in cerebral hemorrhages that the break in a very small vein is occluded by a soft insecure clot which becomes displaced by vomiting or crying with subsequent renewal of bleeding This may explain in part the delayed and steplike progress in many cases of cerebral hemorrhage Lumbar puncture may give results if the bleeding is below the tentorium, if the bleeding is supertentorial one can anticipate little benefit from this procedure Surgery to be of greatest benefit must be resorted to within the first days of life Early surgery must be controlled by studies of the coagulation time If the time is delayed blood should be injected It would be a formidable operation to attempt surgery in the face of a profound hemorrhagic tendency such as many of these babes present If the operation is delayed from ten to fourteen days then the injection of blood is no essential since the hemorrhagic tendency is overcome early in the infant's life

THE TEMPORARY TEETH*

J ROSS SNYDER, M D
BIRMINGHAM, ALA

Seventeen years ago the American Medical Association met in this city, and at that meeting there occurred in this section a lively discussion on the subject of the toilet of the nasopharynx I recall no word said during that discussion to indicate that any one then present realized the close relationship between the condition of a child's teeth and the nasopharynx

Shortly after returning from that meeting I was the consultant in the case of a 7-year old girl who was pallid, had a rapid pulse and accelerated respirations, had been losing weight, was without appetite, and had low grade fever After what I considered a careful examination I concurred in a diagnosis of tuberculosis The family asked for further consultation with an eminent surgeon The physician in charge and his consultant objected on the ground that the case was medical, not surgical This resulted in both being asked to resign from the case The surgeon was then called in and discovered a gumboil at the site of the first permanent molar, the latter decayed With proper treatment of the mouth condition the tuberculosis disappeared magically The girl today is a fine specimen of healthy young woman, but she has a crooked face—all of which is recited to bring out several points, but chiefly to introduce an inquiry as to why pediatric men continue to ignore the subject of dental pediatrics

I find very little evidence in the subsequent transactions of this section or of any other organization of pediatricians, or in the monographs or in the textbooks of its members, to indicate that due consideration is being given to the subjects of oral hygiene and oral prophylaxis Can we afford longer to dismiss from our deliberations subjects such as these which are not merely related to pediatrics but are definitely a part of pediatrics?

A favorite complaint from pediatricians has been that the government gives more attention to the breeding of cattle than to the breeding of a race Such a complaint is hardly consistent when through our efforts huge sums are being spent on the cow's toilet, though we ignore the importance of a toilet for the child's mouth

Thomas of Minneapolis damns the family dentist who dismisses the little child with the statement "Oh! I can't do anything with those teeth, they are only temporary and your child will have permanent teeth in their stead" He says the man who first called the deciduous teeth the "temporary" teeth committed a crime against children which only years of painstaking education can eradicate I agree with him Probably each of us has experienced much difficulty in securing proper dental care for our little patients I have at times been explosively impatient with dentists I realize, however, that dentists are only human and that they are not entirely responsible for conditions now existing wherein the child is denied proper dental rights Dentists are not to be too much blamed if they give chief attention and most of their time to the seemingly more imperative and the decidedly more lucrative demands on their profession So many adults in our population have mouths in a deplorable condition that if every dentist in the land were to work twenty hours a day, each could be kept busy with needed reparative and reconstructive work, and there would still be many persons compelled to go unattended The demand along this line far exceeds the supply

Notwithstanding notable exceptions such as Fones of Bridgeport, Forsythe of Boston, Ebersole of Cleveland, Oakman, Griffin and Burke of Detroit, Thomas of Minneapolis, Belcher and Burkhart of Rochester Maud Tanner of Portland and a few others, the majority of dentists have neither the time nor the inclination properly to treat temporary teeth The dental profession not only admits but insists on the importance and the necessity of oral hygiene and prophylaxis But just so long as there is a paucity of dentists, so long as the grown man or woman with the toothache can out halloo the child, so long as the adult furnishes the coin, dentists cannot be expected to scramble around and over each other in eagerness to attend to the child's mouth It simply is not done

By way of parenthesis I wish to say in justice to the dental profession that the latter embraces as many selfsacrificing, unselfish and philanthropic individuals as does the medical profession—but each has a goodly majority which is looking out for the main chance

It has been estimated that in spite of antenatal conditions and quite independent of the state of the teeth of parents, the temporary teeth emerge through the gums to all intent and purposes perfect in 98 per cent of children Contrast this with the condition of the teeth of children of school age Leak, New York State dental inspector, says

> Ninety per cent of children in the first grades, not only in the slums but in aristocratic and best sections of cities, have bad teeth, one third have abscessed conditions in their mouths and every fourth or fifth child does not have proper masticating surfaces Of little tots in the first grades 7 years of age, 40 per cent have the six-year molar decayed—a tooth which has not been in the mouth more than one year and yet the first molar of the permanent set decayed

Equally bad conditions have been revealed wherever inspections of the mouths of the schoolchildren have been made

It ought not to be necessary for me to dwell at great length on the dangers to health and on the economical waste which result from such conditions

Pediatricians everywhere have contended for the rights of the child to a clean, wholesome food supply A vast amount of time, energy and money has been expended through our efforts on a propaganda for pure food, clean handling and sterile utensils and conditions Meanwhile, we are overlooking one of the most frequent sources of contamination—the child's mouth, "the mixing chamber of the food" as some one has aptly expressed it Certainly, food cannot pass clean into the stomach through a foul mouth Besides many gastro-intestinal disturbances which can be traced directly to this source, an unclean mouth is often responsible for diseased tonsils and other diseased glands Filth breeds filth both inside and outside the body

It has been conclusively demonstrated that children with bad teeth are more susceptible to infectious diseases

Granting, as Hellman suggests, that there should be a more scientific investigation of the causes of mal-

* Read before the Section on Diseases of Children at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

occlusion, that "the condition should be studied from a developmental, racial, pathologic and nutritional standpoint," this does not preclude the already arrived at conclusion that premature loss of the deciduous teeth is the most frequent etiologic factor in maldevelopment of the face and the jaws

Lest the intent of this paper be lost by provoking a discussion on focal infections, I omit case reports I am not in the least concerned whether you accept or deny that "the elective localizing powers of streptococci in various types in dental infections have been demonstrated" I am concerned as to whether we, an organized body of pediatricians, admit that there are in our country millions of children whose health is in more or less jeopardy because of their unclean mouths Probably a majority of these children display no strikingly marked symptom There may be no pain, no elevation of temperature, no acceleration of pulse rate, no cough, no glandular swelling, no albuminuria, nothing to attract the attention of the ordinary physician, dentist or parent Many of these children, however, do display symptoms which to the pediatrician ought to be pregnant with significance The child may not show a proper interest in things that are attractive to the normal child The appetite may be capricious, the child often spurning good wholesome food while craving sweets He may be as reluctant to go to bed at night as to get up in the morning He may be nervous and fidgety or lethargic, he may be emotional or apathetic, he may be precocious or a dullard, sometimes he is incorrigible To the uncommonly observant, many indications are apparent of the child's being below standard—sometimes mentally, sometimes physically, sometimes in both ways

Fones once said

> If our large steel plants and rolling mills were obliged to reroll from 20 to 35 per cent of their stock, it would not take them very long to find out what was the matter No business nowadays could stand such a high percentage of loss in doing its work over again In our public schools throughout the country, it is a fair estimate to say that the percentage of grammar schoolchildren who are reviewing their grade will range between 20 and 35 per cent In a majority of cities the average will be nearer the latter figure

This statement was made in 1913 When Fones was enabled in 1914 to introduce oral hygiene into the schools of Bridgeport, what he actually found was that 40 per cent of the entire educational budget was being spent on reeducation After five years of mouth hygiene in the school this was reduced 50 per cent, only 17 per cent of the budget being required for the purpose of reeducation

In every community in which oral hygiene has been introduced as a part of the school system, not merely satisfactory but brilliant results have followed It has always meant cleaner, better, happier and more intelligent girls and boys This state of well being is reflected not only on the teachers but on the parents as well At present oral hygiene has been adopted so exceptionally by school boards that communities in which it exists stand out in marked contrast with their benighted neighbors Why is it that a system for which so much can be claimed does not become universally adopted by schools? The ardent souls who have approached appropriation boards advocating oral hygiene have been able to present forceful arguments, they have had no difficulty in proving their case, yet few have succeeded in obtaining the necessary funds

Appropriation boards are too often skeptical of the purposes of a demand which originates and is supported almost solely by dentists or physicians

While there is no question about the desirability of having oral hygiene made a part of every school system, this desirability will hardly be realized until the campaign for funds gains sufficient momentum to overcome the natural reluctance and skepticism of appropriation boards If there is any better way to do this than by getting parents back of the movement, it has not suggested itself to me Even if they had the inclination, dentists have little opportunity to present the matter to parents Compared with physicians, especially pediatricians, dentists have access to but few homes When the child is taken to the dentist it is usually only after toothache has developed, at which time injury—often irreparable injury—to tooth or teeth has been suffered If oral hygiene and prophylaxis only meant brushing the teeth and keeping the mouth clean, pediatric men ought even then to lend cordial support to the movement The question is broader, in that diet plays an important role as an etiologic factor in the development of caries Dentists who are specializing on children's teeth are emphatic in their assertion that, given the care of the child young enough, they can, with the intelligent cooperation of a pediatrician, reduce diseased pulps and caries to almost nil Parents are entitled to education along this line I hope the members of this section will individually and collectively resolve to stop putting the burden altogether on the dentists

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ABSTRACT OF DISCUSSION

DR JULIUS SEDGWICK Minneapolis We can often clear up the diagnosis in obscure cases by examining the teeth carefully A child from Oklahoma was believed to have malaria The organism of malaria could not be found The teeth were cared for and the supposed malaria disappeared We have in each of our clinics a staff dentist who examines any case in which the teeth cannot easily be excluded as the cause of trouble As a prophylactic measure, we have the children sent to the dentist regularly before they have any trouble The dentist associated with us makes a specialty of the teeth of children I think this is very important and it is hard to understand why it has been so long neglected

DR ISAAC A ABT Chicago If the teeth are not properly cared for, if oral prophylaxis is neglected, then the teeth decay or produce abscesses and the question of extraction is raised Most dentists hesitate at extracting these temporary teeth because no room is left in the arch for the eruption of the permanent teeth and deformity and malocclusion result They are right Certain diseases in infancy affect not only the temporary teeth but also the permanent teeth Some years ago I reported a number of cases of tetany in infancy causing in later life enamel erosions of the permanent teeth This whole question deserves further consideration and I would suggest that some one should investigate the whole subject of the relation of decayed teeth to malnutrition pointing out the effects of decayed and neglected teeth on nutrition growth development condition of the blood and other organs

DR W L FUNKHOUSER Atlanta Ga Prevention and the early detection of malocclusion in the temporary teeth is a responsibility we must assume To do this we must recognize the forces which prevent and the causes which produce malocclusion If we will recognize these cases early and have them referred to the orthodontist at once we will preserve for our little patients a normal masticatory and breathing apparatus

DR. LAURENCE R DE BUYS New Orleans The care of the teeth should begin when the first tooth erupts To prevent, as

parents wait until several teeth are out of order to begin the dental hygiene I have been impressed with finding a continuously slightly elevated temperature in children who have had carious teeth over a prolonged period Whenever a mouth shows carious teeth, the oral temperature should absolutely be disregarded, and the rectal temperature be the guide In making comparative observations in these cases, even after the teeth have been removed, between the mouth and the rectal temperature, we are often apt to find the rectal temperature at its normal at 99 6 F and the mouth temperature elevated to 99 or 99 6 F It is far better practice to extract the carious teeth or the carious permanent teeth even at the risk of a resulting malocclusion, than not to do so and expose the individual to the many conditions which may result therefrom and which might permanently either partially or completely incapacitate him Malocclusion, if it should occur, may easily be corrected later

Dr Fritz B Talbot, Boston Dr Abt mentioned that children who have had tetany have poorly developed teeth The recent work of Howland and Marriott on blood examinations in these cases, and Dr Denis and I have confirmed the work in a large number of cases, shows that the blood in acute tetany contains a very diminished amount of calcium during the acute stages of the disease Of course, the teeth are formed principally from calcium

Dr C F Wahrer, Fort Madison, Iowa The dental association of Iowa passed a resolution two years ago to the effect that they were not going to take orders from any physician, because they knew more about what should be done for a child's teeth, no matter how badly diseased, and what influence they might have on focal infection, than the doctor So strongly is this opinion held in our state that I had to go finally to the State University to find a dentist who would extract some teeth for my wife, in order to prevent her eyesight from being totally ruined Between extremes lies an immense amount of truth, and by papers and discussion of this kind, and the use of good judgment and available literature we surely can arrive at the truth of what will be necessary for the child

Dr. E C Fleischner, San Francisco I have numerous children brought to me with the same statement that the dentist said the teeth are too poor to fill, but he does not want to pull them because of the effect on the eruption of the permanent teeth I tell every one of those mothers that every tooth is either good enough to fill or poor enough to pull I have stated that before state dental societies, county dental societies and local dental societies, and I never have found a dentist with sufficient courage of his convictions to challenge that statement A carious tooth which cannot be filled corresponds absolutely to a sequestrum of bone It is contrary to all known surgical principles to leave a sequestrum anywhere in the body Why should an exception be made in the case of the temporary teeth?

Dr J Ross Snyder, Birmingham, Ala We should talk about prophylaxis and oral hygiene more in pediatric societies I do not think we ought to begin to condemn or apologize for the dentists until we take a little more action ourselves

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Overconsumption of Sugar—The observation of Garner on monkeys that they prefer acid fruits when in the wild state but when in captivity soon become enthusiastic about sweets points to sweet eating as a habit There can be no question as to the important place which carbohydrates must always hold in the diet since with fats they furnish a very large proportion of the energy required, nor can we disregard the value of sugar itself when taken in moderation and with regularity and, under certain unusual conditions, in large amounts There seems, however, to be no proof that sugar is absolutely essential after the period of infancy, when its presence in considerable amount in the milk of the nursing mother points to its necessity in the early months before the digestive processes have become able to convert starches but after this digestive ability is established there is every reason to believe that the effort required in the conversion of starches is of benefit to the development and maintenance of the digestive processes and that added sugar tends to impair these functions—F Van der Bogert, *Albany M Ann*, June 1920

SOME OBSERVATIONS ON THE PHARMACOLOGY OF A DIGITALIS BODY*

ROBERT A HATCHER, M D
NEW YORK

The investigation with which this paper deals was started with a view to preparing a digitalis principle in a form suitable for intravenous administration following numerous inquiries concerning such a preparation There seems, however, to be a more imperative need of one which is absorbed from the gastro-intestinal tract with greater uniformity than are the tinctures or other preparations made from digitalis obtained from a variety of sources and including wild grown and cultivated American, English and German leaves, partly from the first year's growth, partly from the second, and dried in a variety of ways

The need of such a readily absorbable preparation has been called to my attention by the complaints of clinicians who were unable to secure the typical effects of digitalis even with large doses of the tincture in use in the hospitals with which they are associated Several of these tinctures were submitted for examination, and in every case the biologic test showed that they were of a fair degree of activity

Certain of the digitalis principles are readily absorbable from the gastro-intestinal tract of man, as well as that of animals, while others are absorbed much less readily, and it seems probable that the failures just mentioned arose from the fact that the preparations contained relatively large proportions of the less readily absorbable active principles

A preliminary report[1] of a method of separating the more readily absorbable principles from those which are less readily absorbable was made about a year ago to the American Pharmaceutical Association Since then modifications of that method have been employed in the effort to separate the more absorbable fraction in pure form and to estimate the amount in the leaf or tincture quantitatively The substance obtained by the several modifications of the method is essentially the same, though it differs somewhat in purity The simplest process for obtaining it consists in placing the wetted ground digitalis on a filter paper resting in water and supported by a wire frame, with a layer of chloroform beneath the water The active principles of the leaf pass into the water by circulatory solution, and the chloroform takes up the more absorbable fraction, leaving the less absorbable in the water The chloroform is then evaporated spontaneously, no heat or chemicals being used at any stage of the operation

There is so much uncertainty regarding the chemistry of digitalis that any attempt at a comprehensive discussion of the subject would be out of place here, but certain salient points of resemblance between this chloroform-soluble substance and digitoxin, and certain dissimilarities may be pointed out It is now generally accepted that digitalis contains digitoxin, digitalin, and one or two other active principles Digitoxin is the only one of these that is soluble in chloroform, while all are readily soluble in alcohol, and none except the ill-defined digitalein is easily soluble in water Nevertheless, water extracts all of the active

* This investigation has been made with the assistance of a grant from the Committee on Therapeutic Research Council on Pharmacy and Chemistry American Medical Association

1 Hatcher R A J Am Pharm A 8 913 1919

principles of digitalis almost as readily as alcohol, a circumstance that affords evidence that these principles exist in the leaf in combination, and not in the free state as we know them

The chloroform-soluble substance resembles digitoxin to a certain degree, both chemically and pharmacologically, and it seems probable that it contains *combined digitoxin, though not* in its original combination, because when once it is separated the substance is much less soluble in water than before, and furthermore, when it is separated there remains another substance which is no longer soluble in water, and which is evidently thrown out of solution by the removal of the chloroform-soluble fraction

The chloroform-soluble substance is resinous in character, brittle when cold, but softening with heat, it has a fragrant odor and an intensely bitter taste, it is soluble in chloroform and in alcohol in all proportions, and when water is added to a not too concentrated alcoholic solution the mixture remains clear or slightly fluorescent, though the substance is only slightly soluble in water, it is insoluble in petroleum benzin and in anhydrous ether, but ether dissolves a part of some specimens, leaving a part which is nearly indistinguishable in appearance and in pharmacologic action from the more soluble portion If a fragment is dissolved in glacial acetid acid, a trace of ferric chlorid added and the solution allowed to flow over an equal volume of sulphuric acid contained in a test tube, without mixing, a dark zone appears at the line of contact, and the acetic acid gradually assumes a green, and then a blue, color, gradually fading to a dirty appearance, the reaction being identical with that given by digitoxin except that in addition the chloroform-soluble substance gives a ruby red color in the upper part of the sulphuric acid

The behavior of digitoxin following its subcutaneous injection in the rat is peculiar, in that the animal, which excretes certain other digitalis bodies (ouabain and amorphous strophanthin) with extraordinary rapidity, shows a peculiar train of symptoms in which clonic convulsions are prominent, lasting for a period of about a week with just fatal doses The symptoms following the subcutaneous injection of a just fatal dose of the chloroform-soluble substance are indistinguishable from those following similarly active doses of digitoxin The rabbit eliminates a nearly fatal dose of digitoxin in a period of two or three hours in marked contrast to the cat and rat It is significant that the chloroform-soluble substance is also eliminated by the rabbit at almost exactly the *same rate as digitoxin Such striking similarities of* behavior in these two animals can hardly be a mere coincidence The accompanying table gives certain points of resemblance between this chloroform-soluble substance and digitoxin

One who has never worked with digitalis or other drug of similar complexity can have no adequate comprehension of the extraordinary variety of compounds which are obtained with slight variations in the method of extraction while the changes in solubility of the active principles in different menstruums resulting from slight differences in the impurities present, are confusing at times

In marked contrast to the ease with which these combinations are broken down or altered is the stability of the most active of the principles which resists long continued boiling in weakly acid or neutral solution, and which I have obtained from a specimen of the fluid extract which had stood for nearly forty years The active substance is associated with a saponin-like material, the greater part of which is separated easily but the last traces of which are removed only with some difficulty It is difficult to remove traces of chlorophyl with which it is sometimes contaminated

It was earnestly hoped that a method might be perfected for the quantitative determination of the chloroform-soluble fraction in digitalis leaves or the tincture in order that the dosage might be determined with reference to the content of this readily absorbable fraction, but the effort has not been successful It appears to be merely a question of overcoming certain difficulties, and it is hoped that a satisfactory method of doing this may be devised

The chloroform-soluble, or more absorbable, fraction and the aqueous residue, containing the less absorbable digitalis principles, are capable of exerting the typical digitalis action as shown on the frog, in

COMPARISON OF THE CHLOROFORM SOLUBLE FRACTION OF DIGITALIS WITH DIGITOXIN

	Digitoxin	Chloroform Soluble Substance
	White crystalline powder	Greenish resinous
	Melts at 240 C	Melts gradually at about 100 C
	Odorless	Fragrant
	Intensely bitter	Intensely bitter
	Solubilities	
Alcohol	Easily soluble	Very soluble
Chloroform	Very soluble	Very soluble
Ether	Insoluble	Insoluble
Petroleum benzin	Insoluble	Insoluble
Water	Insoluble	Nearly insoluble
Color reaction	Positive	Positive (with ruby red)
Action in rat	Peculiar hyperexcitability	Indistinguishable from that of digitoxin
Elimination rabbit	Extraordinarily rapid	Extraordinarily rapid
	Fatal dose per kilogram (Approximate)	
Cat vein	0 35 to 0 5 mg	1 0 mg
Rabbit vein	1 0 mg	2 5 mg
Frog lymph sac	8 5 mg	10 mg

which they induce ventricular systolic standstill, preceded by slowing, irregularity and dissociation of auricles and ventricle, and also by an electrocardiogram (for which I am indebted to Dr R Edwin Morris of the University of Minnesota) which shows a typical lengthening of the P-R interval with small doses and complete dissociation of the auricles and ventricles with large doses, together with a gradual flattening and inversion of the T wave in the cat It also causes emesis through stimulation of the vomiting center in the cat and dog

The relative absorbability of the two fractions (the chloroform-soluble, and the chloroform-insoluble) was studied in the following manner They were assayed biologically by the cat method, which determines the amount required per kilogram of weight when injected intravenously to kill the animal, such an amount being called for convenience a cat unit The fractions were then administered to cats through a stomach tube in doses varying from one to four cat units per kilogram of weight and the symptoms induced were observed The results were not uniform but the chloroform-soluble fracti[illegible] be[illegible]d the more readily absor[illegible] friction is relatively [illegible] residue apparently,

30 per cent of the average fatal dose of the residue causing emesis in cats, while about 40 per cent of the average fatal dose of the chloroform-soluble fraction is required, but the oral doses of as little as one cat unit per kilogram of weight of this fraction usually caused emesis in a short time, whereas oral doses of three and four cat units per kilogram of the aqueous residue sometimes failed to produce any perceptible symptoms On the other hand, the absorption of the aqueous residue was more irregular than that of the chloroform-soluble fraction, and of two animals that received one, and two and a half, cat units per kilogram, respectively, of the same specimen of the residue the one receiving the smaller dose was nauseated and depressed while the other showed no perceptible effects The persistence of action in each case was determined on the following day by the differential test with ouabain (difference between the average fatal dose for a normal animal and that actually required for these cats), and while a single test is not conclusive, the results supported the evidence of absorption just mentioned, the cat which received the larger dose of the aqueous residue required much less of the ouabain than the one which had had the smaller dose It may be remarked parenthetically, that we have found that the absorbability of several of the digitalis bodies from the gastro-intestinal tract of the cat closely parallels that observed in man

An effort was made to estimate the relative amounts of the two fractions in a tincture and in a fluidextract which had been sent for examination because of their failure to induce the typical digitalis actions in man when used clinically in large amounts Though it is impossible to separate these fractions quantitatively, it is at least significant that both of these preparations yielded very low percentages of the more absorbable fraction, and there is little reason to doubt that this fact explains why they proved ineffective in man

We are especially concerned with the uniformity of action of the tinctures which we use by any given method of administration, and not with the presence in them of a variety of substances, including acids, volatile oils, saponins, resins, chlorophyl, sugar and coloring matter not to mention different active principles of unknown and varying degrees of activity, but since different tinctures vary in their absorbability, and therefore in their activity when administered orally, even though they may be of uniform activity when tested biologically, there is need of a preparation of as nearly uniform absorbability and activity as can be obtained I wish to lay special stress on the fact that if one could always use the same tincture of digitalis, one would encounter little difficulty with its use after he had learned the dose, and he would probably never have an occasion to use such a preparation as the one now under consideration

It is with this fact in mind that I present this paper dealing with a substance which I believe to be the most active principle of digitalis in a form more closely resembling that in which it exists in the leaf than any that has been prepared hitherto

A digitalis body [2] designed for intramuscular or intravenous injection must meet the following requirements It must be soluble in water, or at least in a weakly alcoholic menstruum, it must be of uniform activity, it must exert a minimum of undesired side actions, it must not deteriorate rapidly, and it must not irritate the veins or tissues into which it is injected

It is commonly assumed that the highest degree of purity is essential for a preparation which is injected intravenously, but while such a degree of purity is highly desirable, it is not an essential, provided the impurities present are not injurious Tinctures of digitalis from different sources vary widely in their composition, nevertheless they have been injected intravenously with apparently satisfactory results If clinicians have felt impelled to use the tincture in this way despite its disadvantages, it is obvious that any true digitalis body which possesses the essentials already mentioned must be preferable to the tincture

The chloroform-soluble substance meets the first of these requirements in that it is readily soluble in alcohol and is then readily miscible with water, the solution thus formed being fairly stable, the uniformity of activity is assured by the biologic assay, it is about as actively emetic as tincture of digitalis, certainly not materially more so so far as can be determined it does not deteriorate more rapidly than tincture of digitalis, the veins of cats were examined some days after toxic doses had been injected into them and found to be free from evidences of irritation, and numerous doses were injected into one of the ear veins of a rabbit during a period of several weeks No evidences of pain could be elicited following the intramuscular injection into cats, but the following experiment on man is worthy of notice An eighth of a milligram of the active substance, equal to an eighth of a cat unit, in 2,000 parts of physiologic sodium chlorid solution containing about 10 per cent of alcohol, was injected into the deltoid (of the author) After about ten minutes there was a slight burning pain lasting for about twenty minutes When this had become imperceptible during rest, a sudden violent movement of the arm was made with the purpose of determining whether pain could be elicited There was a sharp burning pain lasting a minute or two, but this could not be elicited on repeating the movement There was a slight sense of soreness during the following twenty-four hours when the arm was used, but this was not sufficient to attract the notice The deltoid is more sensitive than the gluteus, but the dose was much smaller than that required for the full therapeutic effects, hence it is impossible to state whether the pain of the intramuscular injection of a therapeutic dose into the gluteal or lumbar region would be too painful or not

From the foregoing it seems reasonable to conclude that the weakly alcoholic solution is suitable for intravenous, and possibly for intramuscular, injection in man, but that its ready absorbability following the oral administration renders other modes of administration superfluous in nearly all cases

SUMMARY

Water exhausts ground digitalis leaves, and from the infusion thus prepared chloroform removes a principle which resembles digitoxin somewhat, both chemically and pharmacologically, and which is more readily absorbable from the gastro-intestinal tract of the cat than is the residue remaining in the infusion

The chloroform-soluble substance is soluble in alcohol, and the alcoholic solution is miscible with

2 While the terms digitalis body and principle are used in this paper it is to be understood distinctly that the substance under consideration is not an alkaloid or glucosid in pure form The substance probably consist of digitoxin mainly and it is probable in combination much as it exists in the leaf although this is only a surmise

water without precipitation, the weakly alcoholic solution undergoing little change in a period of about a year during which it has been under observation

It is a true digitalis body, in that it exerts the typical cardiac action of the latter It is not more actively emetic than is digitalis in proportion to its therapeutic effects

It is believed that it is suitable for intravenous, and probably for intramuscular, injection, in the relatively few cases in which such methods of administration may be necessary

It is hoped that a way may be found to estimate the amount of this readily absorbable fraction in digitalis so that the powdered drug, the tincture or the infusion may be used instead of this chloroform-soluble fraction, which is naturally more expensive than the official preparations

Further pharmacologic studies of the substance are in progress in the hope that the preparation may be made official, should the clinical studies show that it possesses any advantages over the official tincture

THE ABSORPTION OF A DIGITALIS BODY

PRELIMINARY OBSERVATIONS*

CARY EGGLESTON, M D
NEW YORK

The greatest diversity of opinion exists relative to the rate and completeness of absorption of digitalis from the human alimentary canal, and very few accurate observations have been made in this important field In a study of the dosage of digitalis [1] published five years ago, it was shown that the tincture and the infusion, and commercial crystalline digitoxin, were generally absorbed both rapidly and fairly uniformly from the gastro-intestinal tract of man when adequate doses were administered The precise rate of absorption was not determined, but the fact was brought out that the absorption of a single dose of digitalis was apparently complete within about six hours after its ingestion It was also proved that full digitalization could be brought about by oral administration within from ten to twenty hours from the beginning of treatment These observations have been confirmed by White and Morris,[2] and by Robinson [3]

Robinson showed that the initial effects of digitalis appear in from two to five hours after the oral administration of a single large dose of the tincture, and in an unpublished report on the rapidity of absorption of digitalis from the digestive tract of man, H E B Pardee concluded from his observations that the absorption of a single dose of the tincture is practically complete in about six hours, while a marked degree of absorption is almost always demonstrable in from two to four hours

These and other observations indicate that, as a general rule, digitalis is rapidly and fairly well absorbed from the human alimentary tract, and the fact that an average oral dose could be established shows that absorption generally takes place with a considerable degree of uniformity This is borne out by an analysis of the full therapeutic doses recorded in sixty-six cases representing all forms of heart disease, collected from the papers of Pardee [4] and myself, in which only two, or 3 per cent, of the patients showed excessive variation from the average, and in both of these the administration was continued over a considerable period of time One of these patients required nearly two and one half, the other three, times the average dose

Admitting the occasional occurrence of a patient who proves unusually tolerant to digitalis through one or another unknown cause, there remains the much more important occurrence of specimens of digitalis which are for some inherent reason poorly absorbed, irrespective of the patient Thus, Dr B S Oppenheimer [5] records three patients who consumed enormous amounts of a given sample of digitalis without evidences of either therapeutic or toxic action One of his patients took 540 minims of the tincture and 21 ounces of the infusion (same digitalis) in twenty-three days, equivalent to 134 c c of the tincture A second took 3,090 minims (193 c c) of the tincture in thirty-eight days, and the third took 3,735 minims (233 c c) of the tincture (or its equivalent in infusion) in forty-three days These amounts are from five to nine times the maximum average dose required for a sample that is absorbed as well as the average Even when allowances are made for the long periods over which administration was continued, it is evident that the particular lot of digitalis employed was very poorly absorbed Similar observations are reported by Wedd,[6] who records five patients who took of a given sample from four to six times the average total dose with no toxic symptoms, and with little or no therapeutic effect Other instances have come to our attention but we have insufficient data to warrant their inclusion, nor would anything be added by rehearsing them, since the foregoing are sufficient to indicate how poorly some samples of digitalis are absorbed

The observations reported by Hatcher, in which he shows that digitalis can readily be separated into two distinct fractions by extraction of its aqueous solution with chloroform, and his observations on the marked differences in the absorbability of the two fractions from the alimentary canal of the cat opened the way for the clinical study of the absorption of digitalis from a new angle This study though begun some months ago has not progressed as rapidly as was hoped, partly owing to the crippling of our service by the influenza epidemic I regret, therefore, that I can at present make only a preliminary report, which, however, shows results in close harmony with those obtained by my colleague Dr Hatcher on animals

In order first to compare the absorption of each of the two fractions with the results previously obtained with various samples of tincture of digitalis made from high grade leaves the fractions were supplied to me in the form of artificial tinctures in a menstruum of 60 per cent alcohol All the samples were prepared so that 1 c c represented one cat unit in activity These were administered to patients and the

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* Read before the Section on Pharmacology and Therapeutics at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Eggleston Cary Digitalis Dosage Arch Int Med 16 1 (July) 1915

2 White S M and Morris R E The Eggleston Method of Administering Digitalis Arch Int Med 21 740 (June) 1918

3 Robinson G C The Rapidity and Persistence of the Action of Digitalis on Hearts Showing Auricular Fibrillation Am J M Sc 159 121 (Jan) 1920

4 Pardee H E B Note on Digitalis Medication J A M A 73 1822 (Dec 13) 1919

5 Oppenheimer B S Personal communication to the author

6 Wedd A M Observations on the Clinical Efficacy of Digitalis Bull Johns Hopkins Hosp 30 [illegible]

7 Hatcher R A Some Observations on the Efficacy of a Digitalis Body J A M A [illegible]

whole procedure was made to parallel as closely as possible the original plan followed in the determination of the average total human dose of the tinctures In this way the results could be compared directly with those secured from the use of the official tinctures

Twenty-three complete courses of administration were carried out in twenty-one patients, using four different samples of the chloroform-soluble, and one of the chloroform-insoluble, fractions Each of the chloroform-soluble fractions, 8-3-19, 9-23-19 and 2-3-20, was obtained from a different lot of digitalis leaves, while the fraction 3-18-20 was made by mixing the chloroform-soluble extracts obtained from a large number of different samples of digitalis The chloroform-insoluble fraction 9-23-19 was obtained from the same leaf as the chloroform-soluble fraction of the same number

The determination of the average total therapeutic dose of each of the chloroform-soluble extracts was the first problem attacked, since its solution would provide the necessary data for the investigation of other problems The full therapeutic dose of one sample of the chloroform-insoluble fraction was also determined approximately The results of this phase of the investigation are set forth in the accompanying table, in which the corresponding figures for the tincture of digitalis (seven different specimens) and for crystalline digitoxin are included for comparison

AVERAGE FULL THERAPEUTIC DOSES AND PERCENTAGE VARIATIONS FROM THE AVERAGES FOR EACH FRACTION FOR ALL CHLOROFORM SOLUBLE FRACTIONS COMBINED FOR TINCTURES OF DIGITALIS AND FOR CRYSTALLINE DIGITOXIN

Preparation	Full Therapeutic Dose Average	Number of Cases	Per Cent Above	Per Cent Below
Chloroform soluble fractions				
8-3-19	0 153	3	11	20
9-23-19	0 161	6	26	28
2-3-20	0 157	5	20	18
3-18-20	0 182	1		
All chloroform soluble fractions	0 159	15	28	26
Chloroform insoluble fractions				
9-23-19	0 640	4	19	30
Tinctures	0 148	25	97	66
Digitoxin*	0 066	15	66	43

* One very tolerant patient is included in this group If omitted the average for the fourteen remaining cases is 0 063 with maximum variations of 36 per cent above and 40 per cent below

Reference to the table shows that the average full therapeutic dose of each of the first three chloroform-soluble extracts studied is approximately the same The average total dose, calculated from fifteen instances in which one or the other of the four different samples of extract was used, is but slightly higher than the corresponding average for tinctures, as determined from twenty-five cases The activity of the chloroform-soluble fraction for man, therefore, is not materially different from that of the average high grade tincture of digitalis, when the comparison is made on the basis of the biologic activity of each as determined by the cat method of assay

The chloroform-soluble extract contains an average of about 1 mg of solid per cat unit, while the amount of solid per cat unit of the official tincture of digitalis varies widely—between 28 and 44 mg in three samples tested These figures give some idea of the degree of purification of the extract This is further shown by the fact that commercial crystalline digitoxin has an activity of from 0 35 to 0 4 mg per cat unit, or only about three times that of the chloroform-soluble extract Dr Hatcher has shown that the extract gives the typical color reaction for digitoxin, and that it presents many close resemblances to digitoxin pharmacologically In spite of these close similarities, he has shown that the chloroform-soluble extract of digitalis is not the same as crystalline digitoxin, but that it is probably a somewhat altered combination of digitoxin It is of interest in this connection, therefore, to compare its behavior in man with that of crystalline digitoxin The table shows that for man the activity of digitoxin is about two and one-half times that of the purified extract, when the comparison is made in terms of the biologic activity of each as determined by the cat method When, however, the activity for man is compared in terms of weight, it is found that crystalline digitoxin is about seven times as active as the purified extract These comparisons make it certain that the chloroform-soluble extract is not the same substance as crystalline digitoxin, and confirm the results of the laboratory investigations previously cited

Turning now to the question of the absorption of the chloroform-soluble extract, it is seen from the table that the range of variation of dose from the average is much smaller for each of the three fractions investigated, and for all combined, than it is for representative good tinctures of digitalis Thus, for the chloroform-soluble fraction the greatest divergence from the average dose amounts to only 28 per cent of the average, that is, one patient of the fifteen developed full therapeutic effects only after he had received 28 per cent more than the average dose required This contrasts strikingly with the variation noted among a variety of tinctures obtained from different sources, which rises to 97 per cent above, and falls to 66 per cent below the average Further, while no variation greater than 28 per cent of the average dose occurred in a series of fifteen patients receiving the chloroform-soluble fractions six patients receiving the various tinctures of digitalis showed variations greater than 40 per cent of the average dose, in a series of twenty-five

These facts show that the chloroform-soluble extract of digitalis is absorbed from the human alimentary tract much more uniformly than are high grade tinctures of digitalis obtained from different sources, and it should be recalled that some samples of the official tincture obtained from reliable sources are so poorly absorbed that amounts from four to nine times the average full therapeutic dose fail to produce any demonstrable effects or at most produce only slight and insufficient effects The fact that the chloroform-soluble extract is absorbed from the human digestive tract with much greater uniformity than is the tincture of digitalis is alone sufficient to render it a valuable advance in the pharmacy of digitalis, even if it should prove to have no other advantages over the cruder preparations Although at present no definite statements can be made on the basis of clinical investigation, it seems probable that the chloroform-soluble extract will prove to have other advantages, especially on account of its relative freedom from impurities and its ready miscibility with water, so that it should be available for intravenous injection [8]

Before leaving the subject of the irregularity of the absorbability of commercial tinctures of digitalis which are derived from different sources, I want to call attention to the fact that the biologic activity of the

8 The chloroform soluble extract has since been administered intravenously to one patient with satisfactory results and without untoward effects

tincture is not necessarily related to its absorbability from the human alimentary tract This is well illustrated by the fact that the tinctures which Oppenheimer and Wedd found to be so poorly absorbed were both of approximately average biologic activity, and both were considerably more active than some of the tinctures which I found to be absorbed fairly well and relatively uniformly It seems certain that this fact will necessitate a radical change in the method of assay of digitalis for human use, and Dr Hatcher is now approaching the problem of determining both the activity and the absorbability of digitalis as a means of reaching a more accurate estimate of its therapeutic value

The precise rate of absorption of the chloroform-soluble extract has not yet been determined for man, but the evidence so far obtained indicates that it is absorbed at least as rapidly as the most readily absorbed tinctures, and I can cite one case which was examined at least every hour and in which the maximal therapeutic action had developed within two hours and a half after a single dose amounting to about 0 112 cat unit per pound (15 c c total) The persistence of action of this extract has also not yet been determined for man, but again the evidence so far obtained indicates that it is equal to the best digitalis in this respect

The chloroform-soluble extract has been supplied to several others for the study of its behavior in man, and we have reports from two who have used it in several cases Dr B S Oppenheimer of New York states that "the purified tincture of digitalis has proved uniformly satisfactory" Dr R W Scott of Cleveland has administered it in eight carefully controlled cases and reports that "(1) digitalis action occurred in from one to two hours after 10 c c [single dose] was given by mouth The certainty with which one could predict a definite improvement in the circulation in from eight to ten hours was indeed striking (3) Thus far the therapeutic effects have been fairly uniform as indicated by the level to which the heart beat was slowed, with resulting circulatory improvement"

I want to mention the results of the administration of the chloroform-insoluble extract to five patients, two of whom also received the chloroform-soluble extract from the same leaf on another occasion The average full therapeutic dose of the chloroform-insoluble fraction is about four times that of the chloroform-soluble, in terms of biologic activity, indicating that in man as well as in the cat it is absorbed very poorly following oral administration Other studies on its behavior in man have not been made as yet, owing to the obvious lack of value of the preparation

SUMMARY

1 The fairly rapid and complete absorption of digitalis from the human alimentary canal is shown for a number of different high grade tinctures of digitalis

2 Contrasted with this is the very poor absorption of certain tinctures, of which from four to nine times the average therapeutic dose failed to produce therapeutic effects

3 The marked uniformity of absorption of the chloroform-soluble extract of digitalis prepared from a variety of different leaves is shown and contrasts sharply with the variations noted in the cases of tinctures from a variety of sources

4 The chloroform-soluble extract is shown to be absorbed at least as rapidly as the best tincture of digitalis, and its persistence of action is apparently of the same order as that of digitalis of the best grade

5 The observations indicate that for oral administration the chloroform-soluble extract is not superior to a well absorbed tincture of digitalis, but it is far superior to tinctures which are derived from a variety of sources, the absorption of which shows very marked variations when the individual specimens are compared

6 The chloroform-insoluble extract is very poorly absorbed from the human alimentary tract, as well as from that of the cat

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ABSTRACT OF DISCUSSION

DR HENRY A CHRISTIAN Boston Digitalis is a very good drug Its use can be improved by investigation We are getting better products to use in our practice, and consequently this sort of work is of very great importance Although digitalis is not a perfect drug it is not fair to blame the drug too often for getting poor results Even a perfect drug will not give results unless it is used with brains Digitalis is more often misused than almost any other drug You can take almost any preparation of digitalis use it with intelligence and you can get results in almost any condition The average doctor does not get the best results because he does not use the drug with intelligence There is a lack of knowledge as to how to use the drug and there is a lack of observation as to whether the drug is producing the result it should produce It is the failure to know whether we are getting the desired results and to guide ourselves by that observation as to whether or not to increase the dosage which largely is responsible for not getting desired results from digitalis With these better preparations of digitalis and better methods of using them poor results are going to be greatly reduced in number but remember they are not going to disappear because no one can supply you with the intelligence that you may lack, or having it fail to use

DR LEONARD G ROWNTREE, Minneapolis Within the last six or seven years we have obtained digitalis effects that we never saw before I remember quite well when we first used Hatcher's method of standardization in Baltimore. We visited the hospital pharmacy secured various preparations of digitalis leaves and assayed them by Hatcher's cat method There was a variation in potency of 400 per cent in the digitalis leaves which we found there This emphasizes the absolute necessity of using standardized preparations of digitalis in our clinical work

I had a striking experience in relation to the introduction of standardized digitalis into clinical work One day my intern called my attention to some digitalis effects The charts showed a remarkable drop in the pulse rate On investigation it developed that it was the new standardized preparation of digitalis and these were the first cases in which it had been used We can get infinitely better results therapeutically if in all instances we insist on having digitalis that has been standardized The second great development in digitalis therapy came with the dosage introduced by Dr Eggleston Results with standardized preparations but with ordinary doses come at the end of forty eight hours With Dr Eggleston's method the same results can be obtained in from eight to twelve hours This is a tremendous advance since many patients die because of the time required to elicit the effects of the drug Dr Eggleston's dosage unquestionably has saved a very large number of cardiac cases The marked variation in absorbability is a matter of surprise to me This may be due to the fact that we have been using exclusively the Minnesota preparation and in a large proportion of cases the Eggleston dosage In our work in Minneapolis we have never experienced difficulty from lack of absorption

DR CARL EGGLESTON New York If one can always obtain a good preparation of digitalis there is no need for the refinements introduced in this chloroform soluble extract Dr Rowntree is extremely fortunate in being able to work with a preparation of digitalis which is grown and cared for with the greatest of attention from the beginning until

comes into his hands as a finished product, so that he has a preparation which is of fairly uniform activity and uniformly well absorbed The preparations generally used come from every conceivable source and are made with every conceivable degree of care and lack of care So the products, while standardized, may or may not be readily absorbed We have had several specimens submitted that were irregular in absorption and very poorly absorbed The more we see of these the more we think there is something to be gained by the effort to reduce this irregularity in absorption, which we try to avoid by the use of the chloroform-soluble preparations described

OBJECTIVE SYMPTOMATOLOGY OF FOOT STRAIN *

ALBERT H FREIBERG, M D
CINCINNATI

Since it is now generally acknowledged that we are unable to tell, from the appearance of a foot, to what extent it is or may be the cause of suffering and consequent disability, it seems desirable to have as definite knowledge as possible of such symptoms as may be brought out by careful objective examination We know that a foot may perform its functions, for a long time at least, painlessly and without undue fatigue in the presence of evidently abnormal relations between the foot and the leg, or between the relations of the bones of the foot toward one another It is nevertheless to be assumed that individuals with such abnormal conditions bear in them the potential factors of disability, which require only the added element of unusual functional demands, trauma, or infection to call forth a situation which will bring them to us for aid When this time comes it is often the case that the symptoms are localized at a distance from the foot which, after correct analysis, must be recognized as the fundamental seat of trouble Failure to recognize this means failure to apply the remedy which will be effective

The functional interdependence of the large joints of the lower extremity is generally acknowledged, it is easy for one who has studied the mechanics of the joints to understand how continued use of feet which are visibly out of adjustment may in time react injuriously on the mechanism of the knees and call forth symptoms in them without doing so in the foot itself The situation is more or less akin to that of the patient who suffers from headaches produced by defects of ocular refraction, without knowing or having known that there was anything wrong with his eyes But there are many who suffer from the same character of symptoms who have no organic defect in the eyeball itself, but in whom the symptoms must be ascribed to muscular insufficiencies which in their turn make it necessary for the organ to do its work at great disadvantage, this it is able to do for greater or less periods until the limit of functional margin is reached That the approach to this limit is hastened by factors of different kinds is well known, even in the eye these may be said to consist of the same three groups before mentioned, although not in the same order of frequency, thus unusual functional demand, infection and trauma

What is not generally appreciated with regard to the foot is that a very large number of persons, by reason of their footgear, have insensibly reduced their muscular working limit or "margin of safety" to such an extent that they enter the phase where the strain of further function makes itself felt either in loco or at a distance, without a cause which is to them perceptible Since it has not been understood by medical men until quite recently, and since it is even now not commonly borne in mind, it is not strange that it should be difficult to explain this pathologic physiology to patients of even unusual mental grasp We require, in fact, to sweep first before our own door The difficulty is one of functional analysis We have means of determining the absolute and relative strength of functional response in the leg and foot muscles, have we a means of determining by *objective* examination the result of impairment of that strength in the absence of subjective symptoms on the part of the foot? However important deformity may be when it is present, we must acknowledge that it is not to be regarded as the gage, that the patient's power of "accommodation" may be entirely sufficient to neutralize this

In the days when the physical abnormity of the foot was the clinical index, local tenderness was of second importance only in the examination It failed of reliability in the same measure as the element of deformity In older writings on the subject of flatfoot, we usually find allusion to tenderness at the scaphoid tubercle, later in the literature we find discussion of the variability of this symptom, just as we do with regard to the flatness of the foot In other words, when the individual who has marked pronation-abduction at the astragaloscaphoid joint is suffering, he is very likely to be tender at the scaphoid tubercle by reason of the abduction A large proportion of cases with evident deformity have however, but little or none of it in the sense of abduction of the forefoot, it is not surprising, then, that under such circumstances there should be a failure to find tenderness at the scaphoid tubercle

In considering the nature of foot strain and its remoter symptoms, we are generally agreed that impairment of muscular control is the element of fundamental importance, that deformity need not be at all apparent and that in a quantitative sense it is not even a reliable guide to the severity of symptoms, nor yet as to the difficulty which we shall experience in trying to relieve them We recognize the fact commonly, on the contrary, that if the ligamentous apparatus is congenitally relaxed, or if it becomes so by reason of such disease as rickets or by the very gradual loss of muscle control, and if under any of these conditions there arises no excess of functional demand, great degrees of physical deformity may be present or may develop in the complete absence of subjective symptoms or disability in an ordinary sense We agree that the foot pains which bring patients to us seeking relief are to be looked on as reactions on the part of the very sensitive periosteal attachments of the ligaments on which abnormal stresses are permitted to fall because of muscular insufficiency, we realize also that with visible mechanical maladjustments at the lower end of the leg, coarse disturbances of the lines of weight bearing and muscular balance may produce difficulties in function for the knee, hip and even the spinal joints What we do not usually appreciate is that many individuals with feet muscularly impaired are succeeding in maintaining a quite correct general posture notwithstanding, but that this cannot be done without improper expenditures of muscle power else-

* Read before the Section on Orthopedic Surgery at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

where This is in the same manner as the individual with ocular defect, who manages nevertheless to use his eye with an abnormally great expenditure on the part of his accommodation There is this, however, to be emphasized, the individual who experiences the effect of such eyestrain is the one who, by reason of inherent energy or great pressure from without, does succeed in obtaining intensive, efficient and long continued function from his handicapped organ In the absence of such intensive use, the reaction at a distance is scarcely to be expected In an analogous way, it might be expected that the individual who is going to suffer from muscular strains at a distance from the foot is not the one with general postural "slump", on the contrary, it is likely to be the one who succeeds in maintaining an attitude more or less correct, and we are for this reason likely to find it in individuals to whom pride of personal appearance is an important consideration

In the absence of physical abnormality and of subjective symptoms in the foot itself, how shall we then be able to determine that the foot must be looked to as the source from which other functional strains proceed? Surely not by simply satisfying ourselves by muscle tests that weakness exists, such values are of a character too relative, it would perhaps be better to say that they are too unrelated to the individual himself It would be better to search for a reaction in the patient that might be looked on as the unconscious but necessary result of his diminished muscular capacity

A thoughtful examination of the anatomy of the foot with respect to the purpose of its structure may well be looked to in order to form a conception of the true meaning of some of the abnormal manifestations there to be observed That the foot is not meant to be a merely passive support for the body, a pedestal *on* which to stand and walk, but rather a living organ *with* which to stand and walk, has become a truism, but one which is constantly being forgotten Too much has been thought and said about the arches of the foot, too much, in other words, about its intrinsic structure and too little about its mechanical relationship to the rest of the lower extremity After all, it is by a study of this relationship, perhaps, that we shall be able to learn more about the remote results of functional disturbance in the foot, having done this we shall be better able to examine the abnormal foot with an eye to the finer details of its abnormality

Viewed in this way, the most striking feature about the mechanism of the foot, when regarded as a whole and with respect to its functional relationship to the leg, is the fact that its construction is such that a means must be provided to keep it in line with the rest of the lower extremity, during weight bearing The transmission of the body weight to the ground takes place through a line corresponding to the axis of the tibia, passing through the center of the tibio-astragaloid joint approximately, but which passes through the os calcis not at its center but decidedly mesial or internal to this point This may be seen in any anatomic drawing of the ligamentous preparation of the foot, viewed from behind The resulting tendency of the foot as a whole to cant inward on the leg unless prevented by muscular action is emphasized in every description of the foot mechanism

While the eccentric position of the astragalus on the os calcis is to be regarded as the chief reason for the tendency which exists for the foot to move into pronation, unless prevented from so doing by muscular action, it should not be overlooked that there is another mechanical factor of importance in this connection This has been emphasized by Roberts[1] who calls attention to the "globular contour of the inferior bearing surface of the os calcis" He says further "If the under surface of the bone was flat instead of round, many valgus deformities would never occur" While it is perhaps not justifiable to make this statement in quite so final a manner, there can be little doubt of the importance of this mechanical factor when combined with the eccentric position of the os calcis with reference to the center of gravity of the leg On the other hand, it seems quite right to say that the obvious purpose of this condition of mechanical instability is to provide for elasticity of gait through the muscular control

If we examine the illustrations of the ligamentous preparations of the foot as found in Hicks's work or as found in Spalteholz's and Toldt's atlases we shall find that the ligamentous checks to motion in pronation and abduction lie in the internal lateral ligament of the ankle, chiefly This ligament otherwise spoken of as the deltoid ligament, is a composite structure made up of several bands The band of greatest interest in this connection is that one which, attached above to the tip of the internal malleolus has an almost vertical course downward being inserted below to the innermost border of the sustentaculum tali This band is called the tibiocalcaneal ligament It may easily be seen that when any movement in pronation is not sufficiently controlled by muscular action stress will first of all fall on the tibiocalcaneal ligament, if we imagine the os calcis being allowed to cant inward, as it will tend to do under these circumstances this ligament will be the seat of a cross-breaking strain where it is attached to the inner border of the sustentaculum Since pronation and abduction of the foot are practically always associated, the tendency is for the head of the astragalus to rotate outward on the os calcis, this implies a movement inward of the posterior part of the astragalus The ligamentous check to this movement is found in a short band which is attached to the posterior process of the astragalus behind, and which passes almost horizontally forward to the posterior end of the sustentaculum In the case of latent weakness of the muscles controlling supination and adduction, even though no deformity in the opposite direction be apparent, we shall be able to comprehend that abnormal stresses are continually falling on these two ligamentous bands and that their periosteal attachments are under these circumstances likely to be tender to pressure, for this reason

It has always seemed to me that if our explanation of the cause of pain in foot strain is correct, that if it is to be ascribed to ligamentous strain because of insufficient muscular control and if the pain must be regarded as proceeding from the periosteal attachments of the ligaments as their only sensitive parts then it is to be expected that their attachments should be found tender as a rule in such cases It has, however been observed that the tenderness at the scaphoid tubercle is very often absent, in my experience it is more often absent than present in cases of undoubted foot strain in which marked deformity in abduction is not a feature This might be explained by assuming that the seat of strain must for this reason be situated

1 Roberts, P W Am J Orth Surg 11 [illegible]

elsewhere This having been assumed, the study of the ligamentous preparation of the foot resulted in the conclusions just before mentioned It remained now to investigate the conditions, clinically

For several years I have made it an invariable practice, in examining the foot for functional strain, to test the sustentaculum for tenderness I did this for a long time before mentioning it to my associates I was surprised to find that practically all persons who had undoubted foot strain were tender at this place, whether deformity of the foot was present or not The degree of tenderness varied considerably, so far as I was able to tell by the patient's response, it was not always severe in proportion to the sensitiveness of the foot or the amount of the patient's suffering For the last two years, I have taken every opportunity to test the tenderness of the sustentaculum in persons who were free from the symptoms, at least, of foot strain I was interested to note that a large number of these also presented this tenderness Many others, particularly men who wore sensible shoes, did not It seemed, furthermore, that the tenderness in these symptomless feet was less marked and more difficult to demonstrate than in those who presented themselves because of foot discomfort

With the idea of trying to explain the significance of these observations, it appeared worth while to attempt to find a way to measure the degree of tenderness which could be called forth It seemed feasible to do this by measuring the amount of pressure required to produce the first appreciable sensation of tenderness on the part of the patient Even though this involves the personal equation, both of patient and examiner to some extent, it has resulted in findings of quite uniform character, which to me, at least, seem of some value Having suggested the plan of estimating the degree of tenderness to my associates in the hospital, Dr D R Maddox and I both produced simple appliances, of different construction, for registering the amount of pressure made over a point corresponding in size with the tip of the finger It has been used in the following manner After the point of greatest tenderness has been found with the finger, the spot on the skin corresponding is fixed carefully by the eye, the rubber end of the instrument is now carefully placed on this point, and while pressure is very gradually increased, the patient is instructed to say when the first sensation of tenderness is felt The amount of pressure is then read on the scale of the instrument While great accuracy cannot be claimed for this method, it is nevertheless surprising to see how constant the readings have been in the same patient, I have made many tests to ascertain this

Although I have not tabulated them with enough care and in sufficiently large number to justify the presentation of definite conclusions, I have made so many tests on patients that I have thus summarized my own experience

1 Persons who have symptoms which may be attributed to weakness of supination and adduction of the foot practically always have tenderness of the insertion of the tibiocalcaneal ligament into the sustentaculum tali, or at its posterior extremity

2 In such persons the tenderness is usually called forth by a pressure of less than 2½ pounds Most often the reading will be from ½ pound to 1½ pounds

3 Many persons who have no foot symptoms have tenderness on pressure over this point, this is also true of many persons who have no symptoms attributable to the lower extremities at all In this group of persons, pressure of 2½ pounds or more is usually required to call forth tenderness

4 Most persons with strong, symptomless lower extremities are not tender on pressure over the sustentaculum This tenderness is to be regarded as indicative of potential weakness in adduction and supination This is true in proportion to the ease with which tenderness is called forth

5 Further and more extensive experience with this test is necessary before ascribing to it a definite place as a diagnostic measure

The functional interdependence of the individual segments of the lower extremity has been referred to in the first part of this paper This has long been recognized in an indefinite manner as the result of clinical experience Patients with foot strain have told us time and again how they suffered from fatigue and pain in the legs, thighs and back, and we have been able in such cases to dispose of these symptoms by attention to the malposture of the feet Lowman[2] has shown the importance of the external rotators of the thigh in maintaining the proper relations of the leg to the foot, he has set forth the possibility of assisting the restoration of normal muscular balance by gymnastic cultivation of this group of muscles It has been my experience to find his statements corroborated in practice In fact, I am now disposed to regard the exercises for the external thigh rotators as by all means the most important at my disposal

To say at this time that exercises for the restoration of muscular control should constitute an indispensable part of any treatment for foot incompetence may be considered superfluous or perhaps not even germane to the phases of this subject chosen for discussion I feel, however, that no opportunity should be overlooked to emphasize this important factor in treatment Even now it is being often slighted by those in whom it is scarcely to be considered pardonable

ABSTRACT OF DISCUSSION

DR JOHN L PORTER Chicago The astragalus is internal to the line of force in the foot That is why a man standing with his feet widely separated more frequently suffers from foot strain than does the man who actually walks flatfooted In examining for foot strain many of us have failed to find anatomic evidences of disturbance, but by carefully palpating the foot, we have been able to elicit a tender spot over the sustentaculum tali, that is, it is farther back than in the average case Most patients complain of pain at the astragaloscaphoid articulation, but often they complain of pain on the outer side of the foot By palpating carefully you will find the point of tenderness mentioned by Dr Freiberg

DR PAUL B MAGNUSON, Chicago Do you apply pressure quickly or slowly? This is a point of great interest when trying to detect malingerers

DR ALBERT H FREIBERG, Cincinnati Having located the tender spot with my finger as exactly as I can, I place the rubber tip on it and tell the patient to close his eyes, then very gradually I increase the pressure, telling him when he feels the very first sensation of pain to say 'now" I do it just as slowly as I can—that is very important so as to give him opportunity to say when it begins to hurt If you do it quickly, the value of the test is nil as far as detecting malingering is concerned The striking feature about this test is the accuracy with which the patient will say "now' when the same amount of pressure is registered The method has diagnostic value

2 Lowman Boston M & S J Jan 18 1912

INTRACRANIAL LESIONS INVOLVING THE AUDITORY-VESTIBULAR APPARATUS*

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The development of the vestibular tests along with other methods of differential diagnosis in intracranial work has materially extended the field of otology and has increased greatly the usefulness of this specialty, but these things are not so well known as they should be among physicians in general

The extensive course of the eighth nerve fibers through the central nervous system and the synapses of the vestibular nerve endings with almost every motor nerve in the body are of so great importance that more information about the brain can be obtained from the otologic examination, when made by experienced men, than from any other neurologic test

The source of the disturbance in otologic trouble should always be located, whether it be in the eustachian tube, the middle ear, the labyrinth, or whether it be of intracranial origin The manifestation of trouble may be loss of hearing, noises or pain in the head, dizziness, nausea and vomiting, voluntary nystagmus, or any combination of these symptoms Detailed analysis of the various tests employed in differential diagnosis of auditory vestibular disease cannot be considered in this article, but a brief summary of the important practical points utilized in the examination of neurotologic cases is advisable

IMPORTANT PRACTICAL POINTS

1 The hearing tests, when carefully made, are of great value in differentiating between middle ear disease and nerve disease from any source, but they are of no practical value in the localization of the nerve lesion, except when they are considered in connection with other findings that may or may not be directly in relation with the auditory vestibular apparatus

2 The vestibular tests give more information than the auditory tests in the localization of lesions involving the cerebellar fossa and the brain stem, and when considered in connection with the auditory tests they are of great value, although these tests should never be depended on to the exclusion of other methods in arriving at a diagnosis

3 An accurate history is absolutely indispensable in this work The exact period at which auditory disturbances came on in relation to other points in the history may be the only means of differentiating a tumor of the auditory nerve from an angle tumor from some other source Likewise attacks of vertigo and digestive disturbances following an infective process in any place in the body may reveal the origin of a cerebellar abscess that becomes evident as such several years later

4 Since lesions of the brain stem and cerebral cortex frequently involve the auditory vestibular apparatus, it is necessary in all case carefully to examine the motor and sensory systems, as they may be implicated directly or indirectly, while the various deep and superficial reflexes, along with the cerebellar tests, are also important points to be considered Usually serologic, urinary and spinal fluid analyses are required and at times chemical examination of the stomach contents and roentgen-ray investigation of the digestive tract are useful in clearing up mooted questions when vertigo, nausea and vomiting are concerned

5 The function of all cranial nerves should be tested in most cases, but, owing to the anatomic relation of the fifth and seventh nerves to the eighth nerve in the posterior fossa, they are more likely to reveal some disturbance than other nerves The seventh or facial nerve, which is in direct contact with the eighth nerve in the posterior fossa, is supposed to be more frequently implicated than other nerves in auditory vestibular disease, but clinical evidence does not bear out this claim In a series of thirty neurologic cases all revealing some form of auditory vestibular disturbance, I found that only 10 per cent revealed seventh nerve trouble, whereas over 80 per cent revealed fifth nerve disturbance of some nature, including subnormal corneal reaction anesthesia, hyperesthesia or analgesia of the face loss of taste, neuralgia, burning sensation in the mouth and nose, and other forms of paresthesia

INTRACRANIAL LESIONS

Intracranial lesions involving the auditory-vestibular apparatus may be considered to advantage under three heads (1) lesions primarily involving the cerebellar fossa, (2) lesions primarily involving the brain stem and midbrain and (3) lesions primarily involving the cerebral cortex and subcortex region

1 Lesions in the region of the cerebellum are of special importance to the otologist as they include many conditions that are amenable to improvement or cure if they are diagnosed early and properly treated The lesions most likely to be encountered here are acute inflammatory diseases involving the meninges, acute and chronic abscesses, tumors of the meninges and of the nerve trunks syphilis in its various forms traumatism circulatory diseases, tuberculosis and multiple sclerosis

Eighty per cent of the abscesses in the posterior fossa originate from infected ears, consequently, the diagnosis and treatment of this condition falls primarily to the otologist, who must be familiar with the differential diagnosis of lesions in this region and with the various operative procedures required for relief In all major otologic operations, repeated vestibular tests should be made as they often indicate impending intracranial trouble long before clinical symptoms develop

Cushing[1] states that 6 per cent of all brain tumors and over 20 per cent of all posterior fossa tumors originate from the eighth nerve, and that the syndrome for the auditory nerve tumor is unmistakable for that of other tumors of this region yet in thirty-five referred cases reported by him a definite diagnosis had not been made in most cases before very serious damage had occurred such as blindness paralysis or respiratory complications The eighth nerve syndrome consisting of primary deafness followed by fifth or seventh nerve trouble on the same side and later by other angle symptoms, is of great importance to the otologist, as relief from the disturbance, or the life of the patient depends materially on how early operative procedures are advised

* Read before the Section on Laryngology Otology and Rhinology at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Cushing Harvey Tumors of the Nervus Acusticus and the Syndrome of the Cerebellopontile Angle Philadelphia W B Saunders Company 1917

At least 50 per cent of all cases of brain syphilis present some impairment of the auditory-vestibular apparatus, and in many cases bilateral lowering of the high tones and raising of the lower tones, with subnormal vestibular reaction, are the earliest indications of approaching trouble Neuritis of the eighth nerve, syphilitic meningitis and gummas are the forms of syphilis most often encountered in the cerebellar region

Traumatism, tuberculosis, circulatory diseases and multiple sclerosis form a group of lesions that occasionally implicate the auditory-vestibular apparatus in the posterior fossa The treatment of these conditions is far less satisfactory than in the previously enumerated diseases, but these conditions are not hopeless, by careful observation some of them can be materially relieved or improved

2 Any of the diseases already considered may also involve the auditory-vestibular apparatus in the brain stem, but the symptomatology in brain stem lesions varies considerably from that encountered in the cerebellar region Certain additional diseases peculiar to the nervous system are encountered in the medulla, pons and midbrain region, such as tabes, syringomyelia and poliencephalitis However, the preponderance of brain stem lesions are included under syphilis, tuberculosis, circulatory trouble and toxemia

3 Cortical and subcortical disturbances of the auditory-vestibular apparatus have not been investigated thoroughly However, the tracts of the auditory fibers are well known and the auditory centers are known to be located in the first temporal convolution on each side of the cerebrum, and lesions in that region may produce disturbance in hearing, especially if bilaterally located No doubt somes cases of deafness originate from this source which are presumed to be of labyrinth origin, as microscopic study of the pyramidal cells in the first temporal convolution reveals intercellular changes similar to those found in the motor and sensory pyramidal cells, in certain diseases Possibly in exceptional cases the auditory disturbance in tabes, poliencephalitis, paresis, toxemia, and especially in some of the infectious diseases, are from this source

The subcortical association tracts in connection with the auditory centers are fairly well understood The different forms of aphasia from tumors, abscesses, hemorrhages, etc, involving these tracts frequently reveal important information in cerebral localization Conjugate deviation of the eyes, which is often encountered in the vestibular tests, may arise from lesions situated in the cerebral cortex or deeper structures

SYMPTOMS FROM TRANSMITTED PRESSURE

According to the best authorities, equilibrium is a muscular act innervated by the cerebral cortex and governed largely by the coordinating influence of the cerebellum, which receives impulses from the labyrinth, from the skin, muscles and joints, and from muscles of the head and eyes Vertigo is a symptom of disturbance of equilibrium, and in all cases in which the vertigo is of a rotational character the disturbance involves the vestibular apparatus directly or indirectly

The relation of rhythmic nystagmus to disturbance of the vestibular apparatus is very well understood Bechterew, Cajal and other investigators long ago described the anatomic connections between Deiters' nucleus, Bechterew's nucleus, and the posterior longitudinal bundle Clinical observations have verified these assertions and we now know that nystagmus from central origin may be independent of vertigo, and vice versa

Aside from intracranial lesions that directly involve the auditory-vestibular apparatus, tumors in the supratentorial region, or frontal lobe tumors, may produce symptoms from transmitted pressure that are quite similar to those observed in direct lesions, here, the vestibular tests are frequently very valuable in the differential diagnosis between cerebellar and cerebral lesions

GRADUATE OTOLOGIC WORK

The localization of intracranial lesions involving the auditory-vestibular apparatus requires more knowledge of the nervous system than is usually taught in postgraduate work on otology As this specialty has so much in common with intracranial work, possibly, selected courses on brain anatomy, neurology, and special operative work, in addition to the regular clinical courses, would be an improvement over the present system of teaching neurotology in our schools, and would do much to further develop this subject

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ABSTRACT OF DISCUSSION

DR ISAAC H JONES, Los Angeles The most fundamental error which might arise in regard to neuro-otologic work is that in attempting to present a picture of the intracranial pathways, it has never been done with the thought that all of these pathways are definitely established Miller and Weisenberg many years ago presented a *schema* or outline of cerebral localization, making it very clear that it did not mean that there was *no other work to be done on* this subject, but that it was felt advisable in such an utterly new subject to take first of all the pathways that we know definitely and bring out a tentative schema which was most reasonable according to the data already at hand The same thing is true now, and it surely must be clear that it is but a scaffolding on which to erect ultimately the *more definite* and exact course of the fibers of this enormous mechanism Dr Carpenter has given a very excellent classification of the three types of intracranial lesions in which the tests may be of service

DR HAROLD I LILLIE, Rochester, Minn I do not believe we have sufficient data from the ear examination to warrant us in designating the type of pathology with which we are dealing in the cranium Be that as it may, there are certain conditions, for instance in multiple sclerosis, in which the neurologists dislike very much to make a diagnosis of multiple sclerosis without finding some evidence of lesion within the brain stem In neuro-otologic work we are frequently able to assist in the diagnosis of multiple sclerosis by finding and isolating the lesion affecting one of the tracts in the stem This has been done repeatedly in our clinic Meningitis and brain pressure particularly are difficult to differentiate in certain types of cases New intracranial pressure and old intracranial pressure cause different objective phenomena A recent increase of pressure is very liable to give an exaggeration of the response, an old pressure may give an obliteration of the response, which makes interpretation of reports difficult and sometimes impossible A supratentorial lesion may give neurologic symptoms and indications of cerebellar tumor because of the pressure produced We had one such case where because we were able to get our response through the cerebellum we said the cerebellum was free A cerebellar decompression was done The patient came to necropsy and the lesion was found in the supratentorial anterior fossa Since that time the surgeons have given a little more consideration to our suggestions The interpretation of objective findings is difficult and requires intensive study but I feel certain that if it is done in large clinics where there is ample material for this work, we eventually will arrive at some definite and valuable information

DR. TOM A WILLIAMS Washington D C The credit in this country for the study of the intracranial lesions which show themselves in morbid vestibular reaction is mainly due to Dr Jones, and his collaborator, Dr Fisher Their cooperation with Dr Mills, a neurologist, achieved one result at least which is most fruitful, namely the differentiation of the tract which carries the impulse from the horizontal canal as against the tract which carries the impulse from the vertical canals While it is most gratifying to find so many otologists now turning their attention to the neurologic aspect of otology, namely, the lesions which occur beyond the vestibular nerve, more particularly within the cranium yet we neurologists all find that the interpretation of lesions of the brain stem is one of the most difficult tasks of clinical neurology, even for those of us who have devoted our lives to perfecting ourselves in a knowledge of the anatomy, physiology and clinical study of the brain stem There are so many fasciculi and they are so complicated, and some which are not known, that it is very difficult to form judgment, more particularly when we remember that the same symptom complex may occur whether the lesion causing the disorder is within the brain stem itself or is only pressing on the brain stem I appeal for closer collaboration with the neurologist in these cases The assertion has been made that a growth at a distance is more apt to cause excessive function That is only true, perhaps, of the excessive function of the brain tissue itself It is not true of the most frequent of all symptoms, namely, the paralysis of the abducens nerve A large growth may invade the area of the brain without producing any symptoms whatever because the growth infiltrates around the nerve fibers without interfering with their nutrition or subjecting them to pressure

DR GEORGE W MACKENZIE Philadelphia I wish to confirm Dr Williams' remarks and also what Dr Carpenter said in reference to careful history taking A patient who had a large cyst of the frontal lobe prior to operation had no symptoms other than severe headaches very marked choking of both optic nerves and symptoms referred to the vestibular apparatus Although hearing was normal spontaneous nystagmus was marked when looking in any direction The patient had bilateral pastpointing inward of about eight or nine inches I made a diagnosis of lesion of a silent area operated, and recovered a large cyst about the size of a goose-egg The point was, and this applies to the diagnosis of stem lesions as well that we must reckon with what the Germans call "fernwirkung symptoms which by the way, was not original with them. In Sir William MacEwen's work on pyogenic infections of the brain and cord, written in 1893, he dwelt on the fact that lesions such as tumors in one cerebral hemisphere can cause pressure on the opposite side of the medulla oblongata by impinging against the rim of the foramen magnum with symptoms referable to the side of the pressure We must constantly reckon with symptoms of this kind in all cerebral lesions capable of producing intracranial pressure Furthermore it is a generally recognized fact that the earlier symptoms in intracranial conditions especially when of an inflammatory nature, are irritative in character, later we find them paralytic In studying the history of a case if we are able to determine just where the first irritative symptoms began we are often able to determine the site where the lesion began

DR JULIUS GRINKER Chicago In the last few years neurologists have been at a loss to know what to do with their cases The surgeons have taken up brain surgery very reluctantly Some of them have displayed such ignorance of the anatomy and physiology of the nervous system that I hesitate to refer a case for operation although the lesion is localizable Few surgeons know enough about the nervous system to handle the tissues differently from the abdominal viscera, for instance Otologists seem to know much about the nervous system I saw Dr Jones demonstrate his theories of localization in cases subjected to surgical intervention particularly one in which I made the diagnosis By his tests he localized the lesion for which that patient had been operated on There are two distinct sets of symptoms which enable a diagnosis of brain lesions to be made One is the irritation syndrome, the other the syndrome of destruction phenomena, applicable generally in cerebral lesions and to a lesser degree in cerebellar lesions In the irritation syndrome cases functions are somewhat exaggerated instead of a patient losing his hearing he hears too much there is tinnitus instead of a patient losing his sensations of pain he suffers from hyperesthesia In the other syndrome there are losses—such as deafness anesthesia etc This applies to manifest cerebral lesions but for the brain stem we must apply different standards because these lesions rarely give rise to general pressure symptoms In these lesions we need your help most because in the absence of pressure symptoms the first symptoms seem to be those of the localizing variety The same holds good for the space between cerebellum and pons

DR EUGENE R CARPENTER Dallas Texas For a long time the ophthalmologist and otologist have been interested in the intracranial side of our specialties but not until Barany brought out his work were we so deeply interested His observations extended over several years Later George MacKenzie of Philadelphia did some valuable work in reporting his experience while associated with Barany and individually in establishing the time of twenty four seconds for after-turning nystagmus Harvey Cushing later reported his experience with tumors especially of the auditory nerve and other tumors involving the cerebellopontile angle Still later, Jones and Fisher of Philadelphia published their work on equilibrium and vertigo and although I do not agree with them in everything it has stimulated interest in intracranial work more than anything that has been produced and were half the things in the book wrong we should be grateful for the work they have done We should be very careful in using isolated neurologic tests for making diagnosis in intracranial work as it is a most difficult field and if we do that the time will come when we will bring discredit on ourselves As to the otologist going into this line of work it has been forced on us We waited many years for the neurologist to develop something to help us out materially in reference to deafness The further development depends on otology

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THE PERSONALITY OF THE PATIENT

A NEGLECTED FACTOR IN TREATMENT*

LOUIS CASAMAJOR M A M D

Professor of Neurology Columbia University College of Physicians and Surgeons

NEW YORK

The truism that the physician should treat patients rather than diseases has become so much a medical platitude that usually it is not appreciated in its full meaning To most physicians it means that therapeutic indications depend more on the individual variations of the patients' reaction to the disease process than on any intrinsic nature of the disease itself This individual organic reaction is ever an important factor in symptomatology, especially in acute diseases, but besides this there is the individual psychologic reaction to disease, which plays an important part in the symptomatology, prognosis and treatment of all diseases, but principally those of chronic course Disease, and more especially chronic disease is an added experience element in the life of the patient and one that must be considered in his adjustment to his life both present and future Chronic organic disease usually necessitates a change in the patient's mode of life makes life more complicated and often less pleasant and thus forces on him an adjustment to less ideal activity and interests usually quite at variance with his former life

*Read before the New York [illegible]

Thus, in all diseases of long duration, frequently there comes sooner or later to the attention of the physician a group of symptoms which, although they have nothing to do with the organic groundwork of the trouble, yet may cause more real difficulty to the patient than those more real in nature Usually these are passed over lightly as "neurotic symptoms," and the patient is left to suffer more in mind than he does in body This is a mistake, for these are the symptoms that can be removed, greatly to the comfort of the patient, a process all too frequently done by the "faith healer" or other quack, all to the detriment of the physician The physician who understands and treats the patient should be the one to understand and remove these symptoms, and only when he does this does the physician justify the ideals which the community holds for him

My purpose is to point out the origin and nature of these added symptoms appearing in chronic organic diseases, and their importance and significance to the patient Probably it is better to term them "personality symptoms" rather than simply to name them "neurotic symptoms," for by such a term we are likely to remove them too far from their real connections with disease They are "patient symptoms" in contradistinction to "disease symptoms," and they represent the psychologic readjustment of the patient to his environment, now further complicated by his disease and his realization of his lessened efficiency, which the true disease symptoms have forced on him A case in point may not be out of place

B D, aged 43, a waiter, came to the Vanderbilt Clinic complaining of insomnia, nervousness, tremulousness, excitability when subjected to sudden noises, and pain and hot feelings in the back of his legs and thighs Formerly he had had a business of his own, but two years previously he failed and had been obliged to accept a position as a waiter in order to support himself and his family He had never been content with this adjustment and, with the mounting cost of living, his life had become more difficult About one year before, the nervous symptoms mentioned began to appear, and they had gradually become worse For the last thirteen years his vision had been failing especially his ability to see clearly in the dark or in very bright light At that time he was told in an eye clinic that he had "night blindness" This condition had progressed but slightly, for his vision now was 20/50 About five weeks before coming to see us he was struck in the leg by a motor truck He was laid up at home with pain in his leg for a few days, but soon was again obliged to take up his work to support his family At this time the pains and hot feelings in his thighs and legs appeared, and were present only during the day while he was at work Physical examination was entirely negative except for some narrowing of the visual fields, and a retinitis pigmentosa of moderate degree

Most interesting in this case is the fact that the patient voluntarily came to a neurologic clinic with a history of symptoms quite "neurotic" Only on extended questioning was one able to bring out symptoms of the organic disease from which he was suffering To his mind the psychic symptoms were the more important, for they occupied his thoughts much more than did his vision difficulty, and interfered much more with his efficiency as a worker These were the "personality symptoms" in this case, and represented the reaction of the patient to his life, now made further unpleasant by the presence of the organic disease whose results he feared

The meaning of the "personality symptoms" is clear Excitability to noises, tremulousness and anxiety are all symptoms of fear, and fear was the predominant psychologic element that his organic disease had injected into his life He had been told he would never get well and in all probability would eventually lose his sight This prognosis and the fear it engendered altered the whole course of his life Another individual of different personality, possibly more philosophical, might have accepted the condition as it was and not have developed such active fear, and so not altered his attitude toward life However, our patient was of different fiber, and complicated his unhappy lot by the addition of a group of fear symptoms of his own making

He began to take more interest in himself than in his business and, following his business trouble, he accepted the position of waiter because he lacked ambition to build up his own work again, and the position of waiter was an easy compromise in the difficulty in which he found himself It was not satisfactory, for he felt that his earning capacity had been permanently diminished by factors over which he had no control, namely, the organic disease This disappointment, then, gave rise to the depression with the anxious coloring which dominated the clinical picture when he came to us, which was manifested by the "neurotic symptoms" These are the symptoms that are capable of removal, while those of his retinitis are not To remove these symptoms would be to increase his happiness and raise the level of his efficiency as an earner, probably to very nearly his former level This neurotic part, then, all too frequently neglected, should be the part to receive the greatest attention of the physician, for it is with this part that the best therapeutic results are possible

This patient reacted psychologically in this way to retinitis pigmentosa It is most probable that he would have reacted in quite the same way to any other chronic organic disease that impaired his efficiency and darkened his future In this man we would have expected to see the same symptoms had his organic disease been chronic nephritis, diabetes, chronic arthritis, chronic cardiac disease or arteriosclerosis

These neurotic or personality symptoms we see appearing in many patients with chronic disease, and in every case they depend on the personality of the patient and his psychologic reaction to his disease, and not primarily on the disease itself Not all individuals suffering from these chronic diseases complain of the same neurotic symptoms, and many never develop such symptoms at all or allow their disease materially to alter their attitude toward life This difference depends on the individual psychologic differences between patients that thing we call personality

When one comes to analyze the foundation of these 'personality symptoms," a number of factors readily come into view Probably the most important of these is the element of "temperament" of the individual Often it is extremely difficult to determine on what this is based We know one person to be optimistic and another pessimistic in his general outlook on life, one is naturally euphoric and another easily depressed, one is care-free and another full of worries, one is goodnatured and another irritable and quick to anger, one altruistic, another primarily selfish An attempt to analyze such characteristics takes one deep into the field of psychology, yet a few of the most prominent factors may be mentioned

Age plays an important part Youth is hopeful, old age is sad The attitude toward chronic disease fre-

quently reflects this age element The hopeful attitude of the tuberculous, especially those of early adult life, is proverbial, and most likely depends more on the age of the patient than on anything in the disease itself The carcinomas, on the other hand, are usually seen in later life, and here again the hopeless depression is, in part at least, a symptom of the age of the patient Besides this there are many other factors which determine temperament, the racial traits in the patient, the history of his life's experience, the hardships he has undergone, and lastly that thing which we call "feeling of well-being," in which we find many elements, but especially the proper working of his bodily organs, in the disturbances of which his disease itself may play no inconsiderable part

Given, then, the individual of a certain temperament afflicted with a chronic, but not disabling, disease, we may see extra personality symptoms arising in the clinical picture according to the patient's needs, and often these symptoms completely obscure those of the original disease Two questions naturally come to mind Why does the patient need these extra symptoms, and where does he get them?

The need for the extra symptoms springs from the patient's need to express the feelings that his disease engenders in him, in terms more understandable to himself and others In the first place, the realization that he is diseased brings with it a feeling of personal insufficiency and inadequacy to meet the requirements of his existence Often he now begins to care for his health for the first time in his life, and this introspection leads to an introversion of interests so that he may give consideration for his health an excessive relative value over the other factors of his life We then say that he has become "hypochondriacal" He seeks for symptoms in himself, and when he seeks he finds, often in the exaggeration and perpetuation of temporary symptoms formerly unheeded

Another factor not to be too lightly valued is the striving for sympathy a real need to the sick human being While we sympathize with chronic disease as a theoretical proposition, yet in the concrete we sympathize only with symptoms Hence the need of these extra symptoms to get for the patient the sympathy and consideration he feels is but his just due If his disease has few outward manifestations to call for sympathy he can, if he needs, develop others, in the form of pains, weakness and anxieties, all of which impress the beholder

The source from which these extra symptoms are derived is suggestibility, that all-important element in human psychology Suggestibility is the ability to accept with conviction a communicated proposition in the absence of logically adequate grounds for its acceptance It is the basis for faith and belief, and the human mind believes always just what it wants to believe This increased suggestibility of the chronically diseased may depend on one or both of two factors (1) an abnormal state of the brain caused by the disease process, or (2) a deficiency of knowledge of the nature of the disease and what symptoms it may cause

To the hypersuggestible patient who needs extra symptoms, suggestion for the formation of new symptoms comes from many sources and in varied forms From his own past experience with disease and neurosis he may cull much that meets his needs The conversation of kind and sympathetic friends is usually a rich field for suggestion The reading of medical books and articles and "patent medicine" circulars will provide any number of useful symptoms And the suggestion all too frequently comes from the physician, often from an unfortunate chance remark or even from the expression of the face during an examination It was frequently said in the British army in the war that many soldiers got 'soldier's heart" from a medical board

These extra symptoms in organic disease should receive the most careful attention from physicians Often they are more disabling than the disease itself Anyway they are more susceptible of removal, and by their removal the patient's happiness and efficiency is improved In the technic of removal one must counteract the factors that have caused them The temperament of the patient is often susceptible of improvement by a better understanding of himself and his motives The need for the extra symptoms is often still more difficult to combat This need may be lessened, in the first place, by a more accurate knowledge of the nature of his disease and its processes Then again the patient's adjustment to his disease and his lessened efficiency may be made more compatible with mental health and happiness Many physicians do this by telling of other patients with the same disease who had made better adjustments, and by giving the details of how it was done And lastly, symptoms due to suggestion may be removed by contrasuggestion Suggestion has ever been a considerable part of the armamentarium of the successful physician, suggestion by word, by act and by attitude, as well as suggestion connected with physical and chemical therapeutic practices, and this healing suggestion should be applied to the organically ill quite as much as to the pure neurotic

40 East Forty-First Street

Clinical Notes, Suggestions, and New Instruments

THE BEDSIDE DETERMINATION OF THE BLOOD UREA NITROGEN

EDWARD STEINFIELD M D Philadelphia

Although the determination of the urea nitrogen of the blood has become an invaluable procedure as a diagnostic and prognostic indicator in diseases of the kidney it has been relegated to the laboratory because of the time consuming and technical details connected with all usual methods The desirability however of having a simplified even though approximate method of measuring nitrogenous waste retention becomes apparent in those cases in which for one reason or another the laboratory is not available Of distinct value in this direction has been the method recently described by Myers[1] For some time a method similar in principle though differing in its end reading had been used by me and ample data had accumulated to demonstrate its accuracy to a fair though approximate degree as a rapid clinical test

The method utilizes the procedure of Folin for coagulation of blood proteins by sodium tungstate and ⅔ normal sulphuric acid The tungstate and acid are however added first before dilution with water and after incubation with urease this procedure has given rapid coagulation and uniformly clear filtrates A 1 10 dilution of the filtrate is used and the color produced by the presence of Nessler's solution is compared to a set of artificial standards described in detail by

From the Laboratories of the Graduate School of Medicine University of Pennsylvania Dr John A Kolmer director

1 Myers V C Chemical Changes in the Blood in Disease I Latent Nephritis Am J M Sc 165 418 (April) 1923

2 Folin Otto and Hsien W u A System of Blood Analysis J Biol Chem 38 81 (May) 1919

The reason for diluting the filtrate is to avoid the greenish discoloration and precipitation produced by the presence of amino-acids and peptones, as pointed out by Folin

METHOD IN DETAIL

Blood is taken from a vein or finger puncture into a test tube containing a few crystals of potassium oxalate to prevent coagulation Two c c of this sample are allowed to drain from an Ostwald pipet into a large size test tube A crushed tablet of urease (0 1 gm) or 1 c c of a urease solution prepared after the method of Folin and two drops of a buffer solution[3] are added to the same tube The test tube is then placed in a tumbler or beaker of warm water with the temperature approximately from 45 to 50 C for ten or fifteen minutes At the end of this period 2 c c of a 10 per cent

RESULTS OF BLOOD UREA NITROGEN DETERMINATIONS

Number	Mg Urea Nitrogen per 100 C c of Blood: Clinical Method	Van Slyke-Cullen	Diagnosis
1	80	83	Chronic diffuse nephritis
2	20	22	Normal
3	10	12	Normal
4	100	104	Chronic glomerular nephritis
5	70	68	Chronic glomerular nephritis
6	15	15	Diabetes
7	10	8	Normal
8	10	11	Normal
9	10	12	Normal
10	20	26	Normal
11	70	64	Chronic diffuse nephritis
12	20	14	Primary hypertensive disease
13	70	66	Chronic diffuse nephritis
14	10	12	Normal
15	30	27	Primary hypertensive disease
16	10	14	Normal
17	20	18	Normal
18	80	76	Chronic glomerular nephritis
19	160	147	Chronic glomerular nephritis impending uremia
20	20	17	Diabetes
21	10	12	Normal
22	120	109	Chronic glomerular nephritis
23	100	87	Same after treatment
24	15	11	Gastric case
25	20	16	Renal sclerosis
26	80	91 7	Chronic glomerular nephritis
27	35	39 5	Chronic tubular nephritis
28	10	16 5	Normal
29	10	10 2	Normal
30	15	24 0	Renal sclerosis
31	10	9 9	Normal
32	10	10 9	Normal
33	15	9 5	Normal
34	15	16 3	Normal
35	15	15 1	Normal

sodium tungstate solution and 2 c c of ⅔ normal sulphuric acid are added the tube being agitated during the addition of both solutions Thirteen c c of distilled water is added if 1 c c of urease solution has been used or 14 c c of water if a urease tablet has been used The contents of the tube are thoroughly mixed, a clean rubber stopper being used if necessary and filtered through a small glass funnel and filter paper (about 11 cm in diameter) into a clean test tube It is advisable to replace the first 1 or 2 c c of filtrate back on the filter During the process of filtration a large size test tube is prepared by placing in it 8 c c of distilled water and 1 c c or about 10 to 12 drops from a dropping bottle of Nessler s solution To this tube is added 1 c c of the filtrate and the resulting coloration is compared with a set of artificial standards To prepare these standards 1 c c of a standard ammonium sulphate solution (of which each 1 c c is equivalent to 0 1 mg of nitrogen[4]) is added to a test tube containing 8 c c of distilled water and 1 c c of Nessler's solution The color produced may be imitated by a permanent standard prepared by the mixture of 59 c c of fifteenth molar acid potassium phosphate and 41 c c of fifteenth molar alkaline sodium phosphate To every 9 5 c c of such a solution is added 0 5 c c of a 0 05 per cent solution of phenol red The hydrogen ion concentration of this solution lies between p_H 6 6 and p_H 6 8 Since 1 c c of the filtrate in the test is equivalent to 0 1 c c of blood a standard prepared as above matched by 1 c c of the filtrate would be equivalent to 100 mg of urea nitrogen per hundred c.c of blood A series of standards down to 20 mg of urea nitrogen with intervals of 10 may be prepared from the 100 by diluting out the color with this prepared solution of phosphates, correcting them afterward by comparison with the corresponding dilution of the ammonium sulphate standard These artificial standards may then be used and remain constant for some time if kept in tubes of non-sol glass, sealed, and kept in a dark place when not in use[5] The same precautions in preparing the solution of phosphates are employed as in making standards for hydrogen ion readings In bloods with low urea content 2 c c of the filtrate should be taken and the result is therefore half of the corresponding standard The colors may be matched in small test tubes by placing them in a box similar to that used in phenolsulphonephthalein determinations

Certain precautions are necessary to insure accuracy All reagents and the distilled water must be free from ammonia The water must also be free from traces of organic matter The presence of such ingredients can be detected by adding 1 c c of the standard ammonium sulphate to 8 c c. of distilled water, and last adding about 10 or 12 drops of Nessler's solution No cloudiness should be produced in the first few minutes

The urease must be known to be active or be checked up by its action on a known solution of urea Nessler's solution may be prepared after the method of Bock and Benedict by adding 100 gm of mercuric iodid and 70 gm of potassium iodid to about 400 c c of water This is rotated until solution is complete One hundred gm of sodium hydroxid is dissolved in about 500 c c of water, cooled thoroughly, and added with constant shaking to the mixture in the flask, and then made up with water to the liter mark The ingredients used must be of highest grade purity The directions of Folin may be used if satisfactory mercuric iodid cannot be obtained

The results of a series of tests made with this method and controlled by a standard method, such as that of Van Slyke and Cullen, are outlined in tabular form The controls to Specimens 26 to 35 inclusive, were performed by the chemist, Dr R A Lichtenthaeler

CONCLUSIONS

1 The determination of blood urea nitrogen may be made a clinical or bedside procedure by the use of a rapid and simplified method

2 The results though approximate are sufficient to be of diagnostic and prognostic aid and compare to a fair degree with standard laboratory methods

3 When possible, the more precise laboratory methods should be used later as a check on the clinical determinations

3 Fourteen gm of sodium pyrophosphate in 0 5 normal phosphoric acid up to 100 c c

4 Forty even-hundredths gram of ammonium sulphate of highest purity to a l ter of distilled water

5 The standards and other accessories may be obtained from Edward P Dolbey & Co Philadelphia

A CASE OF PITUITARY DISEASE

CHARLES G BEALL M D FORT WAYNE IND

History—C Z , a boy, aged 17, whom I first saw, Aug 12, 1919, whose mother and father were living and well, had two sisters living and well The mother s mother was insane. The father was a short stocky man whom the boy resembled in build At the age of 12 the patient had mild typhoid, and after this his mother thought he was different, not quite so quick mentally As a youngster he did well in school , he never failed, and went through the eighth grade at 15 years One year before I saw him, while messenger boy at the General Electric Works he noticed that his legs were getting weak, he had insomnia for one month, and the abdomen became large but in the last six weeks the abdomen had become much larger In the last year the head, shoulders, back and abdomen had become very fat The patient had been working for two years His only complaint now was that his legs were somewhat weak, i e, his body was too heavy for his legs (and it looked that way) His mother said his hair had always been fine, but it had become thinner in the last year

When he tried to lift anything he had pain in the lower dorsal region He had an occasional headache He said he was not drowsy or sleepy His mother said there had been no change in mentality He took thyroid for three months without any change in bodily contour, but it did make him more active His mother said he was an inch shorter than he was one year before He had a mustache at 14

Physical Examination—He was a short, squat boy the face very fat the neck short and obliterated by fat, he was very hairy all over the body The chest back and abdomen were fat the legs and arms almost spindling The strength of the extremities was greatly diminished The hands were small, the fingers tapered, cold and clammy He had a good color The thyroid was not palpable There were no palpable glands, the spleen was not palpable, nor was the apex Cardiac dulness was not increased and there were no murmurs The arteries were soft The systolic blood pressure was 165, the diastolic, 120 The pulse was 80 and regular The nose, throat and lungs were negative The liver was not palpable and there was no mass tenderness or free fluid in the abdomen He was very potbellied There was some tympany There was much fat in the abdominal wall The pupils were equal, reacting to light The knee jerks were sluggish, but equal The fundi were negative (left eye error of refraction) There was no edema the skin was rough and dry, scaly, with many areas of dirty exfoliating epithelium, and several linae albicantes (red) August 12, the urinalysis revealed a specific gravity of 1 017, there was an alkaline reaction, there was no albumin and no sugar, August 18, there was a specific gravity of 1 022, with an alkaline reaction but no pus no casts, no albumin no sugar and no diacetic acid The phenolsulphonephthalein test, first hour, showed 42 per cent The glucose test showed sugar in urine

Roentgen-Ray Examination—The right lateral and right lateral stereoroentgenogram of the head disclosed a shallow pituitary fossa and erosion of the posterior clinoid processes

Clinical Course—The boy continued in about the same condition December 5 the weight was 121 pounds The subjective symptoms were practically the same The pulse was 114, with an occasional systole The blood pressure was 165 The urine contained a moderate amount of albumin but no sugar or granular or hyaline casts His condition remained unchanged and he was able to do a moderate amount of light work Jan 30 1920, he became acutely ill with fever, cough and bloody expectoration and these symptoms continued until his death, three days later

Necropsy—This was held twenty-four hours after death and after embalming Examination of the lungs revealed bronchopneumonia and pulmonary edema The heart was negative There was cloudy swelling of the liver There was subacute nephritis The suprarenals, pancreas stomach and intestine were negative There was much fat in the abdominal wall and omentum The brain was normal On inspection of the pituitary fossa the body was seen protruding and elevated on the left side On attempted removal of the sella turcica intact there occurred a spurt of fluid from the sella and the body partially resumed its normal position

Dr V H Moon of Indiana University reported

I have made a careful study of sections of the pituitary body which you sent me some time ago On one side there is a small adenomatous growth of gland cells in the anterior lobe This growth has crowded the normal gland cells to one side and is separated from them by a thin wall of fibrous tissue The growth is very soft and vascular and the cells are arranged peripherally about the vessels and capillaries four or five cells deep There is very little fibrous stroma in the growth The cells are rather regular in size show no mitotic figures and are basic staining They have less of cytoplasm than the cells of the normal gland There is a delicate diffuse increase of fibrous stroma throughout the normal gland substance of the anterior lobes on both sides Otherwise the gland substance shows no changes The substance of the posterior lobe is apparently normal

If the cells of the adenomatous growth have the power to produce the characteristic secretion of anterior lobe cells such a case would show clinical symptoms of hypersecretion If they do not have that power there would be evidence of hyposecretion due to the normal cells being displaced by this nonfunctioning adenomatous growth Adenomas of this character are described as producing both types of pituitarism'

Special Article

OBSERVATIONS ON SOUTH AMERICA

III CHILE

WILLIAM J MAYO M D
ROCHESTER MINN

In the latter part of the nine crowded years of Pizarro's life he started two expeditions south of Peru, into the country called Chile The first expedition was beaten back by the valorous Araucanian Indians The second met somewhat better success, but the Indians were not conquered Eventually after more than 100 years of ruthless warfare an armistice was arranged which ended in an alliance It was these brave Araucanians who gave the native strain to the Chileans, the most militant people of South America

The troops in Chile are German trained Before the Great War the uniforms, helmets, and general equipment were German but they have been changed to English designs The cavalry horses are beautiful and well trained In the navy the training and equipment have always been British

The long-standing boundary dispute between Chile, Peru and Bolivia is a source of friction and a peaceful Pan-America depends on its settlement There are from four to five million Chileans on 2,700 miles of Pacific coast, an approximate distance of as far as from Alaska to a point opposite Mexico City Undoubtedly the Chileans feel cramped on this narrow strip of land, a little less than 300 000 square miles, and it is only human that they should look with appraising eyes on the great countries of Bolivia and Peru The Chilean military attitude is the index to his characteristics, that is efficiency and self-reliance

Chile has the finest railroad system in South America, both for military and for civil purposes American equipment, with Pullman cars, etc, are used There are no lotteries or open gambling in Chile, and a strong prohibition party exists, with evidences of control of the liquor traffic

The port towns of Arica, Iquique and Antofagasta have hospitals, all of which we visited We visited also a large military and civil hospital in Tacna situated in a fruitful oasis near the Peruvian boundary The hospitals of Chile are supported largely by the state The hospitals at Iquique and Antofagasta are much larger and have better equipment than those at Arica and Tacna They are under the direct charge of a progressive Catholic bishop and are managed by French and Italian Sisters Each hospital has a training school for about forty nurses, drawn from the lower and poorly educated classes, who are really drudges for the sick rather than nurses and a training school for about thirty midwives The bulk of the patients in these hospitals are from the outlying nitrate (saltpeter) mines The buildings are unscreened and although flies are not usually numerous they are uncomfortable evident in the medical wards Water is scarce in this

rainless region, it is piped from the mountains long distances, and is expensive Lack of trained nurses, lack of adequate water supply and lack of screens are the weak features in an otherwise excellent hospital system, but these defects are being rapidly overcome The great American mining corporations on the coast and inland, such as the Guggenheims, have their own hospitals These corporation hospitals are screened and thoroughly equipped with American appliances, and have American physicians and trained nurses Dr W F Shaw, who has had twenty years' experience in the tropics, is in charge of the Guggenheim hospital

Valparaiso, a city of about 280,000, has a number of fine hospitals, built with the high ceilings, verandas and patios typical of the Spanish plan There are separate hospitals for men and for women, and for children under 10 years of age All the newer hospitals are built on the general type of the American hospital, with pavilions for men, women and children, the same operating rooms, laboratories, etc, are used for all There are pavilions for private patients in which the rates, the cheapest of any in South America, range from $2 50 to $10 a day, gold This includes ordinary nursing and medical care No fee is charged for operations if they are performed by the surgeon who is paid by the year from the hospital fund Other surgeons make their own arrangements with patients The British and American residents maintain a hospital of about 100 beds It is under the supervision of a British surgeon who, since he has no license to practice in Chile, employs a Chilean licensed physician to act obstensibly as chief This subterfuge is employed also in some of the large mining hospitals Needless to say, such arrangements are sources of irritation to the Chilean physician A hospital is maintained by the German colonists located on a sightly spot on a hill The attending surgeon is Dr Munich, grandson of a German colonist, and one of the best surgeons in Chile

A schedule of operations performed in the hospitals in Valparaiso, Feb 13, 1920, is as follows

German Hospital Dr Munich
8 00 a m Nephrectomy
8 30 a m Intervention for cholecystitis for an old fistula between the gallbladder and small intestine
11 00 a m Hernia
11 30 a m Hemorrhoids
Hospital de San Agustin Dr Iturrieta
9 30 a m Cancer of the uterus, cesarean section for constriction of the pelvis
8 15 a m Dr Engelbach Cholecystectomy for biliary lithiasis
Hospital of San Juan de Dios, Dr de la Fuenta Cholecystectomy

Santiago, the capital and largest city of Chile, is situated at an elevation of 2,000 feet on the river Mapacho in a valley surrounded by snow-capped mountains The site of the city is unusually beautiful, and, unlike the cities farther north in Chile and Peru, it is blessed with rain The city government is progressive and excellent All things considered, Santiago may be said to be the most beautiful residential city on the west coast, if not in South America

The hospitals in Santiago are very good The old ones are being remodeled along American lines The surgeons are doing excellent work Prof Lucas Sierra, well known in America was abroad preparing plans for greater hospital extension His colleague, Dr Amunategui, dean of the medical school, and one of the foremost surgical teachers of South America, was in the city, but expected to leave shortly to join Dr Sierra on his mission

There is but one medical school in Chile, and that is in Santiago The school compares favorably with medical schools in other countries Opportunities for English and American physicians in Chile are not alluring Examinations to qualify for practice are given in Spanish, they are highly technical, and are given under conditions that have not been surmounted by any American physician in recent years When it is taken into consideration that the school in Santiago has a seven-year course and 1,000 students, of whom only about thirty-five of the senior class succeed in graduating each year, the natural handicap is easily seen Some of the students who eventually graduate spend eight, nine or even ten years in preparation for the final degree A fine hospital of 700 beds is directly associated with the medical school The buildings for both institutions are spacious, dignified and well equipped, and are situated on a large, beautiful tract in the heart of the city We attended a number of interesting surgical clinics and demonstrations Professor Noe, who was trained in Italy, showed us some very beautiful specimens of *Ancylostoma duodenale*, with microscopic slides This disease was first found in men working in the Simplon tunnel in Switzerland and is endemic in certain mines in Chile We were interested also in the treatment of anthrax by Lugol's solution, which appeared to be extraordinarily efficient

The Public Assistance Association in Santiago should be mentioned especially It is supported by the state and municipal governments, and is under the control of the faculty of the medical school The association has its own hospital, in which all emergency surgery is done Ambulance stations are located in different parts of the city, centering in one hospital which is in direct communication with the criminal courts All postmortem examinations are conducted under the medical jurisprudence department of the medical school, in marked contrast to the inefficient coroner system in the United States All cases of stabbing, shooting and accidental injury pass through the hospital, and the student derives the benefit of all medical and legal examinations The uneducated native Chilean settles his disputes with the knife and inflicts ghastly wounds, which make the razor slashes of our nonvoting voters south of the Mason and Dixon line appear trivial in comparison I was told by a Chilean surgeon that when the Roto takes out his knife, all South America squeals and runs Any one seeing some of the injuries he inflicts would certainly be inclined to lead in the running

The ambulance service is quite remarkable This was demonstrated by a call from the Institution of Physical Culture and Therapeutics to one of the most distant stations in the crowded part of the city The dean stepped to the telephone, put in the call for public assistance, and shortly a peculiar, high-pitched horn was heard in the distance All traffic stopped at once, and in two minutes and forty seconds an ambulance with two physicians and a nurse in attendance was at the door Temporary assistance may be had on telephone call day or night in any part of the city by any person, rich or poor, who is sick or in trouble

The new dental college, connected with the medical school and under the direction of Dr German Valenzuela, professor of maxillofacial surgery, is an institution which is of interest not only professionally but

historically The equipment is American and is complete in every respect The instructors are men who have been trained in Philadelphia The circumstances which led to the building of the dental school would furnish a thriller for the movies, the story was told in the presence of Dr Valenzuela, who was obviously very much embarrassed

In 1909, the consul general of Germany was found murdered in the basement of the burned German embassy building in Santiago The safe had been emptied of a large amount of negotiable securities Notwithstanding the care of the assassin to destroy completely the building, much of it was saved by the excellent fire department, and the body in the basement was not wholly consumed, and was identified as the German consul by the finger rings, watch, parts of clothing, hair and mustache The janitor, a younger man of about the same size and general appearance, had disappeared Germany, at the height of her power, was justly indignant over the crime, Chile, profoundly disturbed, did everything possible to mollify the kaiser, and made preparations for an ostentatious funeral with naval and military parades Eulogies of the dead consul were made by high officials of Chile and by foreign diplomats Under the international law the embassies and consulates are under the jurisdiction of the countries they represent but the Chilean law required an examination of the body before its burial Dr Valenzuela in conducting the examination observed the perfect condition of the teeth They were complete, except for one third molar, which had been extracted, this was inconsistent with the age of the consul The bereaved Chilean wife of the consul was interviewed, and said that her husband had had a great deal of dentistry done, and she gave the name of the dentist who had done the work The dentist's records showed that various gold fillings, bridges and artificial teeth had been inserted The janitor's wife stated that her husband had a full set of teeth with the exception of one wisdom tooth

The two feasible means of escaping from Chile are by the Transandean railway and by the sea and the former is often obstructed by landslides and washouts An order was given to close the frontiers and the German consul in disguise was discovered at the Argentine border, where he had been held on his way to Buenos Aires by an avalanche temporarily obstructing the train The money taken from the vault was found in a belt around his person He was tried and executed for the murder of the janitor, whom he had stabbed shaved, and dressed to change his appearance, he had then robbed the safe and set fire to the building The affair created a sensation, and Dr Valenzuela was called before the Chilean senate and congress, who rendered public recognition of his service He was asked to name his own reward, and made the request that $700,000 should be given to build a dental college on the American plan a project he had been working on for ten years The request was granted at once, and the splendidly equipped institution is the result

The Chilean people are independent and self-reliant They are imbued with the American spirit of progress and efficient organization At a banquet one night, wishing to honor the Chileans I said Chileans are the Yankees of South America! There was no applause and I did not repeat the offense

Our reception in Chile was very cordial, and everything possible was done by both the government and the medical profession to give us information and opportunities to examine their educational institutions hospitals and clinics The medical profession in Chile stands very high in the estimation of the people and may be said to be the most influential of the professions The leading medical men have taken postgraduate courses abroad and many of them are graduates of the best continental schools The surgeons of Chile are a splendid body of men and it was a great pleasure to see their work and to study their methods

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION W A PUCKNER, SECRETARY

BENZYL BENZOATE (See New and Nonofficial Remedies 1920 p 49)

Benzyl Benzoate-Seydel — A nonproprietary brand of benzyl benzoate complying with the tests and standards for benzyl benzoate

Seydel Manufacturing Co Jersey City N J

DESICCATED PITUITARY SUBSTANCE (ANTERIOR LOBE)-ARMOUR (See New and Nonofficial Remedies 1920, p 207)

The following dosage form has been accepted

Tablets Anterior Pituitary Armour 5 grains —Each tablet contains desiccated pituitary substance (anterior lobe) Armour 5 grain

OVARIAN SUBSTANCE-ARMOUR (See New and Nonofficial Remedies 1920 p 202)

The following dosage form has been accepted

Tablets Ovarian Substance Armour grains —Each tablet contains ovarian substance-Armour grain

RIODINE —A 60 per cent solution in oil of an iodine addition product of castor oil Riodine contains about 17 per cent of iodine

Actions and Uses—Riodine resembles other fatty iodine compounds See general article Iodine Compounds for Internal Use New and Nonofficial Remedies 1920 p 143

Dosage —From 0 4 Gm to 1 2 Gm (6 grains to 18 grains) per day in capsule taken after meals Supplied only in the form of capsules

Manufactured by Pharmacie Viger Paris France (F Frederera and Co Inc New York distributors) No U S patent U S trade mark No 86974

Riodine Capsules 0 2 Gm (3 grains) —Each capsule contains 0 2 Gm riodine equivalent to about 0 033 Gm (0 5 grain) iodine

Riodine is prepared by treating castor oil with hydriodic acid

Riodine is an oil like liquid light amber in color having a faint alkaline reaction It is insoluble in water soluble in alcohol chloroform and ether

When heated it is decomposed and purple vapors of iodine are given off When heated with alcoholic potash riodine is saponified and potassium iodide formed

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Diagnosis of Drowning as the Cause of Death—Dr E Sockis professor of legal medicine at Liege writes to the *Lancet* to confirm his assertions in 1919 as to the certainty of drowning when solid particles are drawn with water into the lungs and through the wall of the alveoli into the blood The solid particles then show up in the left side of the heart the micropscope revealing particles of silica In normal conditions there is never much silica in the contents of the heart Negative findings are no conclusive and other matter any possible silica in the reagents used Experiments have proved them to be form of vapors He has devised means to hold the blood in the heart The latter is cut at the base and taken under the microscope He has applied the same process at the same time to the pericardium and body was taken from the water

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SATURDAY, AUGUST 14, 1920

INTERNAL AND EXTERNAL ANTISEPSIS

In the modern history of the biologic sciences and particularly in medicine, antiseptics and germicides have played such unanticipated parts and have been responsible for so much which is good that they have furnished words to conjure with Every force that can be enlisted against baneful bacteria is promptly welcomed, but there are no "royal roads" to success in the warfare against these invisible foes, just as there are no panaceas with which every human ailment can be relieved Surgeons of the present day have seen the pendulum of operative practice swing between antisepsis and asepsis without discovering the ultimate ideal of a universally applicable scheme of procedure Only a few years ago, physicians were greatly exercised by the hope of finding a satisfactory intestinal antiseptic Naturally the possibility of being able to rid the alimentary tract of its undesirable microbiotic invaders aroused widespread interest Despite the numerous efforts to demonstrate the efficacy of this or that chemical agent or drug as a gastro-intestinal antiseptic, the outcome has been that the supposed benefits were due to catharsis in most instances rather than to any real effect upon the bacteria in situ The emptying of the bowel is, in truth, probably the most successful mode of decreasing its bacterial flora, according to present-day knowledge

An analogous story appears to apply to attempts to disinfect the outside of the body with alleged antiseptic products For a long time the claims of "healing" "antiseptic" or "germicidal" soaps have been flaunted before the laity as well as the medical profession Thanks to the efforts of Dr Norton,[1] working at the University of Chicago under the auspices of the Council on Pharmacy and Chemistry of the American Medical Association, the facts about "antiseptic" soaps have once more been presented in a true light He has demonstrated that in any event, the cleansing properties of a soap, such as the green soap used in hospitals or even ordinary toilet soaps, are more important than any added antiseptic or germicidal constituent According to Norton's demonstrations, which confirm previous experiments, sterile hands are not obtained in the ordinary process of hand washing Large numbers of bacteria are removed thereby, but more were actually found to be removed by ordinary soaps than by the specially advocated brands The presence of antiseptic chemicals, such as mercury salts, is likely to interfere with the production of a good lather, on which much of the detergent potency depends Furthermore, soap remaining on the hands after washing does not appear to have a germicidal potency

Let us by all means get rid of bacteria on polluted hands, which have been incriminated seriously of late in connection with the spread of disease, but let us also learn to avoid a false sense of security which some labels foster If the public is interested in "buttermilk" soap or "oatmeal" soap, both of which are chemical impossibilities even though they have been advertising actualities, no harm is done except, perhaps to the pocketbook But the words "antiseptic" and "germicidal" are too close to the sacred domain of hygiene and public health to be allowed a promiscuous use

1 Norton J F Soaps in Relation to Their Use for Hand Washing J A M A 75 302 (July 31) 1920

BATHING AS A SOCIAL AMUSEMENT

Many persons at the present time look on baths and bathing in the light of hygienic necessity A study of the history of the bath, however, would reveal this institution as having many other aspects Its various alleged remedial values are conspicuous in the practices and traditions of hydrotherapy Bath resorts are proverbially medical centers in many parts of the world In the ancient days the various modes of bathing and bodily functions acquired an immense significance in the life of the elite in particular, as is attested by the elaborate ruins still extant giving silent evidence of the place of the bath amid the domestic institutions of other times

The counterpart to a visit to what is left in Rome of the baths of antiquity may be suggested by a trip to the Hot Springs or Carlsbads of today, even though the functions of the modern establishments may appear to be somewhat different Lest it be assumed that our own continent is devoid of old records of bathing pavilions of a specialized sort, we quote the observations of the pioneer American explorers Lewis and Clark In the diary of their memorable expedition up the Missouri and across the divide to the Pacific coast in the years 1804-1806 they give a unique description of the sweating baths of Indians they encountered The vapor bath or sweating house was a hollow square six or eight feet deep, formed in a river bank by damming up the other three sides with mud and covering the whole completely except for an aperture about two feet wide at the top The bathers descended through this hole, taking with them a number

of heated stones and jugs of water, and after being seated around the compartment they threw the water on the stones until the steam became sufficient for their purposes This mode of producing vapor appears to have been common

From the social standpoint it is interesting to learn through the account left by Lewis and Clark that among many of the Indian tribes it was very uncommon for a man to bathe alone The bather was generally accompanied by one or sometimes several of his acquaintances Indeed according to the explorers' information, bathing was so essentially a social amusement among these peoples that to decline going in to bathe when invited by a friend was regarded as one of the highest indignities that could be offered to him[1] The Indians on the frontiers nearest civilization generally used a bath which was formed of a wickered work of willow about four feet high, arched at the top, covered with skins, and adapted to a single person In this the "patient" sat until, by means of the heated stones and water, he perspired sufficiently Almost always these baths were in the neighborhood of a running stream, into which the Indians plunged immediately on coming out of the vapor bath, and sometimes returned again to subject themselves to a second perspiration "This bath," we read, "is employed either for pleasure or for health, and is used indiscriminately for rheumatism, venereal or, in short, all kinds of diseases" The same sentence might quite as appropriately be written today

DO THE CEREALS HAVE UNLIKE VALUES IN NUTRITION?

During the food crisis presented by the World War, it became necessary for the experts of the U S Food Administration to consider the seemingly mystical properties of wheat which had made it foremost in popularity among all its competitors in the domain of cereal foods Wheat is not so unique that it has attained an exclusive use throughout the world Rye, barley, oats, corn and rice are likewise popular in many places There are two principal ways of preparing cereals for the table one by baking into bread, the other by cooking in water The inhabitants of Europe and North America use their cereals mainly in the form of bread, most Orientals prefer theirs boiled, and use chiefly rice and corn The cereals differ more in their bread-making qualities than in their food value The proteins of wheat, rye and barley possess such physical properties that the flour prepared from them can be made into a dough that can be leavened or raised, and baked to form a palatable portable bread of excellent keeping qualities Oats, corn and rice may be cooked by boiling, but on baking they will yield cakes that are granular and will not hold together, and therefore cannot be transported except in containers

Despite the fact that the advantages of wheat evidently lie in the external qualities of the products prepared from it rather than in their inherent digestibility, there was much hesitation in employing the cereal substitutes that were urged on our people during the war This attitude of reserve at first was not occasioned merely by a lack of patriotism in following the requests of the Food Administration, but was due rather to a feeling of uncertainty as to physiologic values Would the health of the nation be impaired by the use of the substitute cereals, even if they could be made palatable and dietetically attractive? This and similar inquiries were more than once directed to our experts in nutrition

That all of the common cereals are readily digestible by man may be regarded as finally demonstrated All of them have virtually the same energy value approximating 1 600 calories a pound A 100-calory portion varies only from 25 gm for oatmeal to 29 gm for rice Much of the uncertainty has centered in the problem of the comparative value of the different cereal proteins Sherman[2] clearly demonstrated that the protein of corn is just as satisfactory to keep the body in nitrogenous equilibrium as is the protein of wheat, even when corn meal provides half of the calories and three fourths of the protein Subsequently Sherman and his collaborators[3] came to essentially the same conclusions with respect to the protein components of the oat and wheat With all three of the cereal grains (wheat, maize and oats) tested on man, it was found that a diet in which about nine tenths of the protein was derived from the cereal in the form commonly used as human food, the small remainder being furnished by milk or apple, need contain only from 33 to 40 gm of protein per 70 kilograms of body weight, or about 0 5 gm per kilogram, in order to meet the protein requirement of maintenance in adult human nutrition This is contrary to what some of the German investigators have led us to conclude The upshot of Sherman's studies is that the proteins of wheat, corn and oats appear to be about equally efficient in adult human nutrition and need only be supplemented with small amounts of milk in order to be fully as efficient as the proteins of ordinary mixed diets had been found to be in earlier investigations[4]

If further evidence were needed for the essential equivalence of the proteins of the commonest cereals it could be found in the recently published investigations by Osborne and Mendel[4] Contrasting wheat

1 History of the Expedition of Captains Lewis and Clark 1804-05-06 reprinted from the Edition of 1814 Chicago A C McClurg & Co 2 2 1917

1 Sherman H C Use of Corn (Maize) in Human Food J A M A 70 15 9 (June 1) 1918

2 Sherman H C Wheeler L and Yates A B J Biol Chem 34 383 (May) 1918 Sherman H C and Winter J C J Biol Chem 35 301 (Aug) 1918 Sherman H C Winters J C and Phillip A J Biol Chem 39 51 (Aug) 1919

3 Sherman H C Protein Requirement of Man, Influence on Man of the Nutritive Efficiency of Bread Protein J P I Chem 11 9 (Jan) 19-0

4 Osborne T B and Mendel L B Nutritive Value of the Proteins of the Barley Oat Rye and Wheat Kernels J Biol Chem 41 275 (March) 1920

with barley, rye and oats in experiments in which these served as the sole sources of protein for growth, these investigators have been forced to the conclusion that the proteins of the four cereals studied are not widely different in efficiency for this physiologic purpose It should not be assumed from this that the common cereal grains alone or even a mixture of them suffices to afford satisfactory nutrition The reason for the inadequacy is to be found primarily in a deficiency in certain of the essential dietary components, notably specific inorganic elements and fat-soluble vitamin However equal the cereals may be from the standpoint of comparative protein values, they need a supplement In this role no product surpasses milk But the day of "invidious distinctions" between cereals, from the physiologic standpoint, seemingly is past

THE OUTLOOK FOR THE MANAGEMENT OF DIABETES

In a recent issue of THE JOURNAL,[1] a review of some of the newer experimental studies on partially depancreatized dogs, showing many resemblances to typical cases of diabetes in man, pointed to the conclusion that a spontaneous progressively downward tendency is not necessarily an inherent feature of the disease in the animals Whether the conclusions arrived at, particularly through the investigations of Allen and his collaborators at the Hospital of the Rockefeller Institute for Medical Research, apply with equal probability to diabetes in man cannot yet be stated At any rate, through the demonstration that in diabetic animals the chief cause of downward progress is faulty diet, the practitioner is more than justified in attempting to eliminate this cause by avoiding the dietary injuries illustrated in the animal experiments

The clinical experience of Allen, Stillman and Fitz,[2] in applying the principle of the relief of patients through decreasing their metabolic burden, has given encouraging results, to quote Allen, in proportion as it has received application in practice He[3] has pointed out that the clinical problem requires the same prolonged careful control of all discoverable symptoms as in animals, and cases too severe for such control, or complicated with infections, violations of diet, etc, are on the same plane as animals in which a similar condition has been produced Some proportion of cases, especially in young persons, will be found suitable for accurate determination of the question of whether all or most cases of severe diabetes are inevitably progressive and hopeless

Overenthusiasm for any novelty is sometimes liable to damage the cause that has given birth to it Even the experiments on animal diabetes indicate limitations to the possibilities of the current proposals to spare the overburdened pancreatic function There is an unquestioned benefit from exclusion of preformed carbohydrate and limitation of protein (potential carbohydrate) intake in nearly all cases of diabetes—a benefit exhibited by prolongation of life and well-being to some extent in many cases, and perhaps indefinitely in the mildest cases But even the animal experiments show that in the great majority of instances such a therapeutic result is not permanent, and downward progress is finally observed if the observations are continued long enough The animal experiments do not support any exaggerated claims of cure As Allen[3] judiciously summarizes the present situation In most of these cases, life, strength and assimilation can be preserved for a much longer time by a degree of undernutrition suited to the severity of the diabetes, and accomplished by limitation of fat in the diet The permanence of such control is supported by the unimpaired or rising assimilation in experiments of one to one and three-fourths years' duration, but still longer observations would be desirable Diabetes of great severity is controllable only by correspondingly radical undernutrition In still more severe cases, glycosuria can be abolished only by a degree of undernutrition which entails final death from inanition In the most severe cases glycosuria cannot be stopped, evidently because the assimilative power is too low to dispose of even the minimum supply of food materials, namely, that derived from the body stores in fasting

If diabetes represents an organic deficiency, it is unreasonable to expect to cure rather than merely relieve it by diet This does not negative the possibility, however, that some day we shall be able to stimulate or strengthen the pancreatic function in some direct manner The newer studies on animals may better pave the way to such an achievement

1 Newer Considerations Regarding Diabetes editorial J A M A 75 320 (July 31) 1920

2 Allen F M Stillman E and Fitz R Total Dietary Regulation in the Treatment of Diabetes Monograph 11 Rockefeller Institute for Medical Research New York 1919

3 Allen F M Experimental Studies on Diabetes I Production and Control of Diabetes in the Dog 5 Various Failures of Dietetic Treatment and Their Causes J Exper Med 31 587 (May) 1920

Current Comment

HEALTH AND THE COST OF FOOD

Conditions entailed by emergencies arising from the war and subsequent events have placed an enormous emphasis on the food supplies of thousands of persons in many parts of the world The problem of adequate food allowances to certain groups of people is one of the subjects for necessary discussion at the various peace conferences Relief organizations are debating the same question from other standpoints As a consequence, the serious consideration of public health factors in terms of calories or nems, if Pirquet's new nomenclature is to be employed,[1] has something more than mere academic import at the present time In all schemes for nutrition of the masses, the possibilities

1 The Pirquet System of Nutrition Foreign Letters J A M A 75 332 (July 31) 1920 Faber H K The Pirquet System of Nutrition Am J Dis Child 19 478 (June) 1920

of a healthful diet are involved, not only by economic conditions,[2] but also by the limitations of income We have from time to time discussed the question of the minimum wage as it is affected by the price of food Marketing conditions are changing so rapidly that it is not easy to secure up-to-date estimates The director of the Dietetic Bureau of the League for Preventive Work, Boston, has recently calculated the cost of food in minumum allowance of essential nutrients necessary for health, on the basis of April, 1920, prices[3] Assuming that it was spent to the very best advantage, the lowest allowance on which the well-known statistical family of five could be fed safely was placed at $11 50 a week At a cost of 14 7 cents per thousand calories this would allow, for an adult man, 3,400 calories per day, including 100 gm of protein, 1 gm of calcium, 2 gm of phosphorus and 16 mg of iron, with an abundance of vitamins A safer allowance is placed at $14, or 60 cents for each adult daily In the price of good health which, the slogan says, is purchasable, the cost of adequate nutrition must be included

THE CHEMISTRY OF ODORS

Man and animals alike depend on their senses not only for physiologic delight but also for the warnings against various danger of their environment The "twin senses" smell and taste exercise a peculiarly valuable function in that they stand "like sentries at the portals of the body, where they closely scrutinize everything that enters" Slosson[4] has fancifully remarked that these two special senses lead us to the heart of the molecule and enable us to tell how atoms are put together Sounds and sights may be disagreeable, but they are never fatal A man can live, Slosson writes, in a boiler factory or in a cubist art gallery, but he cannot live in a room containing hydrogen sulphid Until recently there has been little dependable information available about the chemical nature of the odoriferous substances encountered in daily life The so-called essential oils, many of which have a "fruity" odor, have been prepared for some time in the laboratory Experts remind us, however, that the artificial fruit essences are usually composed of a mixture of substances without any guarantee of their actual occurrence in the fruits whose flavors they are supposed to represent An actual identification of the principal flavoring constituent of an edible fruit was apparently first accomplished in 1913 by Kleber,[5] who showed by accurate methods that ripe bananas actually contain amyl acetate the substance commonly designated as "pear oil" Recently Power and Chesnut[6] of the Bureau of Chemistry in the U S Department of Agriculture at Washington have unraveled some of the mysteries of the apple They obtained no evidence that amyl valerate, familiarly designated as "apple oil," is present in the fruit Its odorous constituents were found to consist essentially of the amyl esters of formic, acetic and caproic acids with a very small amount of the caprylic ester and a considerable proportion of acetaldehyd It is not unlikely that some of the alcohol and acids mentioned are also present in the free state All of these various substances occur in mixtures of varying proportions in the numerous varieties of the apple, thus giving rise to slight differences of odor The quantities actually present for example 0 0007 per cent in the Ben Davis and 0 0013 per cent of essential oil in the more odorous crab-apple, may seem small Nowadays, however, the physician who deals with antigens and antitoxins, with radium with vaccines and vitamins, has become accustomed to the possible potency of products in small quantities

2 Mendel L B Changes in the Food Supply and Their Relation to Nutrition New Haven Yale University Press

3 Gillett Lucy H A Minimum Food Allowance and a Basic Food Order J Home Econ 12 319 (July) 1920

4 Slosson E E Creative Chemistry New York the Century Company 1920

5 Kleber C Am Perfumer 7 235 1913

6 Power F B and Chesnut V K The Odorous Constituents of Apples Emanation of Acetaldehyde from the Ripe Fruit J Am Chem Soc 42 1509 (July) 1920

NERVOUS IRRITATION AND TETANY

Tetany is a symptom that manifests itself under a variety of conditions which seem to be decidedly unlike in their pathologic aspects Thus, one may read of gastric tetany and parathyroid tetany without suspecting any immediate common cause Until somewhat recently the spasms were generally assumed to have a reflex origin, in those cases at least, in which they were associated with gastro-intestinal affections It is, of course, not difficult to conceive of a local irritation of afferent nerve endings leading to a tetanic outcome Latterly, however, alkalosis has been alleged to play a dominating part not only in the tetany associated with lack of parathyroid function but also in the symptoms attending gastric disturbances The *identity of clinical tetany with experimental parathyroid tetany* is by no means established Palmer[1] has argued that if irritation of the afferent nerve endings in the gastro-intestinal tract is ever of importance in tetany, it should be in that of parathyroid origin, for in this condition there is not only alimentary disorder but also a hyperirritable condition of both the central nervous system and the peripheral nerves Consequently he has attempted to determine in the physiologic laboratories of the University of Chicago whether afferent influences which reach the central nervous system through the vagi and the splanchnic nerves have any influence on the onset and course of parathyroid tetany Neither artificial gastro intestinal irritation nor double vagotomy and splanchnectomy seemed to exert any appreciable effect If it is justifiable to reason from such observations that these nerves are of no importance in tetanies associated with gastro-intestinal disorder the logical consequence is to favor a chemical explanation This is in harmony with the current tendency to emphasize the importance of toxic products of some sort in the genesis of tetany

1 Palmer W L The Importance of Vagal and Splanchnic Afferent Impulses on the Onset and Course of Tetanus Parathyreopriva J Exper Med 32 581 (July) 1920

Craving for Sweets.—Children who show symptoms of inherited weakness of the thyroid gland have a craving for large quantities of sweets C [illegible] of as an index of body needs only a natural state—F Vander Beet *Illus*

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION, PUBLIC HEALTH, ETC)

ALABAMA

Physician Shot—Dr James G Wilbanks, Odenville, was shot and seriously wounded, July 25 by Dr William P Cooke cashier of the bank of Odenville The shooting is said to have been the result of an old grudge Dr Wilbanks is under treatment at the Birmingham Infirmary

Medical Officers Organize—Physicians of Birmingham who had served in the Medical Corps or Medical Reserve Corps of the Army during the World War met in Birmingham and organized the Medical Legion of the United States electing Dr William M Jordan, president, Dr Gaston W Rogers, vice president, and Dr Leo C Wood secretary, all of Birmingham

State Association Supported—The supreme court has affirmed the decision of the Montgomery circuit court which was adverse to the claims of Dr Thomas D Parke, Birmingham, and other physicians of Jefferson County that the legislature exceeded its authority in delegating health work to the Alabama Medical Association The association will therefore continue to name the state board of health and be the general authority for the enforcement of all state laws regarding health and sanitation

Medical School to Be Moved—The supreme court of Alabama has reversed the decision of the Mobile circuit court against the board of trustees of the University of Alabama The decision enjoined the trustees from moving the medical department of the university from Mobile to Tuscaloosa The higher court holds that the board acted fully within its powers The trustees in April ordered the removal of the medical school from Mobile to Tuscaloosa in accordance with an act passed by the Alabama legislature giving the trustees authority so to do in case the institution at Mobile failed to retain a Class A rating with the Council on Medical Education of the American Medical Association The university is establishing what will be practically a new medical school During 1920 1921 only the work of the freshman year will be given and in the following session two years of work will be given The clinical courses will not be offered until such time as the university feels that they can be established on a high plane

CALIFORNIA

Reciprocal Relations Established—It is stated that reciprocal relations have been established in medical licensure between the New York Board of Regents and the Board of Medical Examiners of California

Society Reorganized—At a meeting of physicians of Imperial County, held May 3, the Imperial County Medical Society was reorganized with an initial membership of twelve, and the following officers were elected president, Dr William W Apple El Centro, vice president, Dr Roy O Thompson Imperial, and secretary-treasurer, Dr Charles S Brooks, El Centro

Personal—Dr Fred P Bowen, Los Angeles, has started for France on his way to the Balkan countries where he is to study typhus fever——Dr Alva J Remmel has been appointed surgeon to the French hospital, San Francisco succeeding Dr Bertram F Alden resigned——Dr William A Hodkinson has been appointed health officer of Santa Monica, succeeding Dr Frank J Wagner, resigned

COLORADO

Radium Purchased—It is reported that the largest piece of radium, in the west, weighing ½ gm and valued at $56 500 was recently purchased by eighteen physicians of Denver

New Clinic Opened—A special clinic established in Leadville by Dr Samuel R McKelvey, Denver, is open on Mondays and Wednesdays from 4 to 5 p m, and on Tuesdays Thursdays and Saturdays from 2 to 6 p m, under the charge of Dr Franklin J McDonald

Specialists Meet in Denver—The Colorado Congress of Ophthalmology and Oto-Laryngology held a meeting in Denver, July 23 and 24, under the auspices of the Colorado Ophthalmological Society and the Colorado Oto Laryngological Society Drs Frank L Dennis, Colorado Springs Edward Jackson, Denver, Thomas E Carmody, Denver, and Harry W Woodruff, presided at the various sessions

DISTRICT OF COLUMBIA

Personal—At the annual meeting of the Indiana Society in Washington, Dr Harvey W Wiley was elected president

Regulation of Anesthesia—The Medical Society of the District of Columbia at a recent meeting adopted resolutions placing the society on record as in favor of the limitation of the practice of anesthesia to licensed physicians, surgeons, dentists and to graduate nurses in cases of emergency or medical students for the purpose of instruction The society asks that other local county and state societies adopt similar resolutions The society also adopted a resolution favoring the establishment of a section of anesthesia in the American Medical Association

FLORIDA

Sanatorium Opened—Dr Marvin Smith announces the opening of his private sanatorium and diagnostic institute at Jacksonville on June 15 The sanatorium is devoted to the treatment of gastro-intestinal diseases and diseases of metabolism

Another Plague Victim at Pensacola—John Henry Hudson Jr 19 years of age died at Pensacola July 14 the fourth victim of bubonic plague Dr Ralph N Green, state health officer immediately left for Pensacola to investigate the plague situation

Flagler Hospital Rebuilding—Following the fire which destroyed its building the Flagler Hospital at St Augustine has a new building well under way which it expects to occupy during the coming autumn The building will have a capacity of 100 beds

Personal—Dr James Q Folmer, Bonifay, has been appointed assistant physician at the State Hospital for the Insane Chattahoochie, succeeding Dr William M Bemis, who recently resigned to accept a position with St Elizabeth's Government Hospital for the Insane, Washington, D C

Government Buys Hospital—For the sum of $75,000 Lake City recently conveyed to the government 313 acres of rolling and attractive land with a number of buildings on it, for the site of a proposed government hospital The ground was originally the site of the Florida Agricultural College and later of the Columbia College, a Baptist institution According to a provision of the state legislature the money realized from the sale is to be devoted to educational purposes

ILLINOIS

Physicians Hold Outing—The midsummer meeting and outing of Jo Daviess County Medical Society was held at Camp 19 near Gordon's Ferry July 29 The address was delivered by Dr George B Eusterman of the Mayo Clinic, Rochester Minn, who spoke on The Medical and Surgical Aspects of Chronic Peptic Ulcers"

Personal—Joseph B Liston, Carlinville, has been reappointed health officer for Macoupin County——Dr Walter H Watterson Chicago has been appointed inspector of public tuberculosis sanatoriums throughout the state——Dr Oscar J Brown DeKalb is reported to have been found guilty with other members of the Communist Labor Party, July 30, and sentenced to imprisonment for one year in the county jail

Typhoid Fever—An outbreak of typhoid fever is reported in Pinckneyville Perry County, where seventeen cases have occurred and a second outbreak at Carmi, Pike County, where twenty cases of the disease have appeared——An epidemic of paratyphoid fever is reported at Fountain Green Hancock County where more than 100 persons are reported to be ill The cause of the disease is said to be chocolate ice cream which was served at a church sociable

Chicago

Sentenced for Sedition.—Dr Karl F M Sandberg one of the organizers of the Communist Labor Party and a delegate to the national convention, is said to have been sentenced, July 30, to imprisonment for one year in the county jail

Radiological Association Organized—The roentgenologists of Chicago met August 5, at the Hamilton Club and organized the Chicago Radiological Association, electing the following officers president, Dr Alonzo C Tenney, vice presi-

dents, Mr A M Olson and Mr J H Brothers, secretary, Mr J W Ross and treasurer, Dr John H Carpenter

Physician Fined—Dr R Staats who has an office in the Chicago Savings Bank Building is said to have been arrested by the Department of Registration and Education for practicing medicine without a license and to have been fined $25 and costs Staats was charged with treating cancers with a remedy which he says the United States government was very anxious to secure but for which it would not pay the price demanded by him

Faculty Appointments in Loyola—Dr Charles Louis Mix has been appointed professor and head of the department of medicine and Drs Milton Mandel and John M Lilly clinical professors of medicine in Loyola University School of Medicine Dr Edward L Moorhead has been appointed professor and head of the department of surgery, Dr William E Morgan professor of surgery and clinical surgery, Drs John F Golden and Charles F Sawyer clinical professors of surgery, Drs Michael F McGuire, George W Hochrein and Frank E Pierce assistant professors of surgery, Dr Philip H Kreuscher, clinical professor of orthopedic surgery, Dr George T Jordan, associate professor of diseases of the ear nose and throat, and Dr Walter McGuire, assistant professor of obstetrics

INDIANA

Sentenced Under Liquor Law—Dr Tell C Waltermire Shelbyville, is said to have been sentenced to the penal farm for thirty days and to have been fined $100 and costs for having intoxicating liquor in his possession

State Medical Board Appointments—The governor has named Dr Paul R Tindall Greensburg a member of the state board of registration and examination succeeding Dr Moses S Canfield Frankfort Dr William R Davidson Evansville to succeed Dr Solomon G Smelzer, Richmond and Dr Eldredge M Shanklin, Hammond to succeed Dr James M Dinnen, Fort Wayne——Dr William S Gott Crawfordsville, secretary of the board, has been reappointed a member

IOWA

Hospital Site Purchased—The North Iowa Lutheran Hospital Association has purchased a site comprising one-half block for St Luke's Hospital, Mason City the erection of which is to be undertaken in the near future

Health Board Reappointments—At the annual meeting of the state board of health held in Des Moines, July 22, announcement was made of the appointment of the following members to succeed others Drs Walter L Bierring, Des Moines, Charles S Grant Iowa City, and George F Sevens Centerville Dr Grant was elected president of the board

Iowa Medical Women Honored—Dr Jeannette F Throckmorton, Des Moines, read a paper before the Royal Society of Health and Hygiene in Brussels recently, on "Fashions and Public Health" Dr Throckmorton is state lecturer for Iowa and an officer in the U S Public Health Service reserve——King Alexander of Greece has conferred the order of King George the First on Dr Blanche Norton Eldon a member of the American Committee for Relief in the Near East who has been treating trachoma among Greek orphans in Anatolia

KANSAS

New County Society—Physicians of McPherson County met in McPherson July 30 and organized the McPherson County Medical Society electing Dr John C Hall McPherson president, and Dr Clinton R Lytle, McPherson, secretary treasurer

Personal—Dr John L Fryer chief surgeon of the Soldiers' Home Leavenworth, has been appointed governor and chief surgeon of the Soldiers Home Hot Springs S D Dr Arthur W Bartel has succeeded Dr Fryer as chief surgeon of the Soldiers' Home

Campaign for Funds—Business men of Rosedale have inaugurated a campaign to raise $32 000 to buy suitable land for administration building laboratories and lecture halls for the medical department of the University of Kansas The Kansas legislature appropriated $200 000 for a hospital building at Rosedale in 1919

State Tuberculosis Association Election—At the annual meeting of the Kansas State Tuberculosis Association Prof Frank Strong of the University Law Faculty was elected president, Dr Samuel J Crumbine secretary of the state board of health Topeka and Dr Lewis H Munn of Stormont Hospital Topeka were made vice presidents Dr Charles H Lerrigo registrar of the state bureau of vital statistics, Topeka was elected executive secretary and Dr Theodorse C Mueller treasurer

KENTUCKY

Society Reorganized—Oldham County Medical Society has been reorganized at LaGrange and Dr Stonewall J Stuck has been elected secretary

Personal—Dr Benjamin F Reynolds Carlisle has been elected full-time health officer of Mason County succeeding Dr J H Rise resigned to accept service with the state board of health Albany N Y——Dr Elwood Wand Woodbury, suffered a fracture of the rib and severe contusions recently when his car overturned near Bowling Green

Violation of Liquor Act—The state prohibition director is reported to have received from Prohibition Commissioner Kramer of Washington reservations to prohibit the sale of liquor on the prescriptions of three Louisville physicians Dr Deddo H W Borgman on account of his failure to keep a record of prescriptions and the abnormal number of prescriptions issued, Dr George F Dwyer who is said to have prescribed whisky to persons having no known ailment and Dr William M Dwyer who is said to have prescribed whisky in abnormal quantities and to have issued 2 000 whisky prescriptions in the first twenty days in March

LOUISIANA

Resigns from State Board—Dr Joseph T Abshire Kaplan for several years a member of the Louisiana State Board of Health, has resigned ill health and lack of time being assigned as the causes for this action

New Hospital in Mansfield—A modern hospital containing twenty one rooms and a separate department for colored patients has been opened in Mansfield by Drs Thomas J Fleming and Albert S Cooper

Leper Home Transfer Bill Passed—The federal government is now ready to purchase the leper home from the state for $35 000 The bill authorizing the sale having passed both houses of the general assembly At present eighty five patients are held in the institution

Fight on Tuberculosis—Tangipahoa Parish Anti Tuberculosis Society, which was organized recently at Amite will carry on a systematic campaign throughout the parish for educating the people regarding tuberculosis Prof W A Siseman was elected president and Mrs H P McClendon secretary of the society

MAINE

Personal—Dr George Holden Coombs Waldoboro has been appointed director of the division of venereal disease of the Maine State Department of Health succeeding Dr Harry E Hitchcock Auburn resigned

Bubonic Plague Warning—Dr L Everett D Bristol state commissioner of health Augusta has issued warnings to the seaport towns of Maine to protect themselves against the entrance of bubonic plague He emphasizes the need of rat campaigns not only in seaport towns but inland, and the rat proofing of buildings cellars docks etc

Health Association Purchases Exhibit—The Maine Public Health Association has purchased an excellent child welfare exhibit of posters which it will use throughout the state at fairs conventions churches and other public gatherings The exhibit consists of twenty series of colored posters illustrating child welfare subjects The exhibit and the supplementary lantern slides and lecture material are supplied by the state department of health free of charge Information concerning this exhibit may be obtained from W A Harris executive secretary of the association or from the Maine Department of Health

MASSACHUSETTS

Gift to Harvard Medical School—The Harvard University School of Medicine received a gift of $[illegible] from the Rockefeller Foundation for the development of psychiatry and $500 000 for the development of obstetrics and

F[illegible] On June 29, [illegible] Hospital [illegible] of Dr [illegible] enla[illegible] S[illegible]

for the day patients The boat leaves at 9 a m daily, returning at 4 30 p m

Personal—Dr Harlan W Angler, Gilbertville, has been appointed associate medical examiner for the Tenth Worcester District——Dr Daniel D Murphy, Amesbury, has been reappointed associate medical examiner for the Third Essex District——Dr Samuel H Calderwood, Boston, has been reappointed a member of the board of registration in medicine——Dr Albert S Hyman resident physician of the Long Island Hospital, resigned, August 1 to become superintendent of Mt Sinai Hospital Philadelphia At a dance given at Long Island, July 24, in honor of Dr Hyman, the officials of the institution presented him with a traveling bag

NEW YORK

Convalescent Camp for Wounded Soldiers—A farm of 2 000 acres near Towners, in Putnam County, has been donated by Mr and Mrs Chester W Chapin for use as a convalescent camp for worthy soldiers or sailors who have been gassed or wounded

Psychopathic Ward for State Reformatory—As a result of a riot and other troubles with the inmates of the State Reformatory for Women a psychopathic ward has been established at the institution under the supervision of Dr Meanas S Gregory and his assistants and nurses from Bellevue Hospital

Free Radium Treatment—The director of the State Institution for the Study of Malignant Diseases Buffalo announces that free radium treatment for sufferers from cancer will be administered beginning October 15 Any citizen of the United States will be treated free of charge but preference will be given to residents of New York state

Appropriations for Buffalo University Medical Deparment—During the past year the council of the University of Buffalo appropriated approximately $132,500 for the use of the medical department Of this amount $65 000 was subscribed by the medical alumni, $17 500 has been used to purchase property adjacent to the medical building $15 000 for improvements in the laboratories in the main building, and the balance is being used for the erection and equipment of new laboratories for chemistry, physiology and pharmacology

Soldiers Allowed to Stay at Saranac—A recent order from the U S Public Health Service directing the transfer of disabled men from the Home Sanatorium at Saranac Lake met with decided disfavor with the men Out of 210 men 200 voted to be permitted to remain The American Legion of New York State then recommended to the Surgeon-General that these men be permitted to remain and it has been assured by the Public Health Service that the order directing the transfer of tuberculous patients at the Home Sanatorium will not be enforced except in cases in which it is requested by the men concerned

Liner Brings Typhus—The French liner *La Savoie* which arrived from Havre August 2 had on board a case of typhus fever which developed during the trip The 217 steerage passengers were transferred to Hoffman Island for observation where two additional cases of typhus fever have developed These passengers are said to have been inspected by physicians of the U S Public Health Service at Havre The records of the health department show that in 1868 there were 157 deaths from typhus fever in New York City, in 1881 there were 612 cases and 163 deaths, in 1893 there were 473 cases with 200 deaths, in 1919 there were 12 cases with no deaths In recent years there have been only a few cases each year as a rule, among tenement house dwellers

New York City

Granted Honorary Degree—At its recent commencement exercises Yale University conferred the degree of Sc D on Dr William Darrach, dean of Columbia University College of Physicians and Surgeons for meritorious services performed during the World War and for his important publications in the field of scientific research

Personal—Dr Jacob Geiger has been appointed director of the New York Diagnostic Clinics and after a survey of the better American laboratories will reorganize the laboratories of this institution——Drs Simon Flexner and Alfred E Cohn, who have been attending the Red Cross Medical Conference at Geneva, arrived in this country on the *Adriatic* August 5

Enlighten Public on Benefits of Radium—Newspaper reporters were invited to attend the regular weekly radium clinic at the Post Graduate Hospital, August 6 The invitation explained that reporters were admitted not for the purpose of witnessing 'marvelous cures" but because the hospital feels "that it is not enough that the public should know that radium treatment is available It feels that the public should know how the treatment is made" It was further explained during the clinic that the hospital had come to realize that the interests of both the institution and the public could be best served by newspaper publicity The hospital is now negotiating for the purchase of 1 gm of radium

Fewer Cases of Sunstroke Under Prohibition—Officials of the health department state that one of the effects of prohibition is a decided decrease in the number of heat prostrations reported On the hottest day of this year, June 11, when the thermometer registered over 90 degrees there was only one heat prostration reported On May 5, 1919, with the temperature at 86 degrees four heat prostrations were reported and on June 3, 1919, when the mercury reached 91 degrees two deaths and eight heat prostrations were reported The ambulance board reports that in June, 1919, forty-nine cases of heat prostration were treated in the hospitals, while in June of this year only nineteen cases of this kind were so treated There appears to be less suffering from the heat in the poorer and more congested parts of the city It is suggested that this may mean that less money is spent for alcoholic beverages and more is expended for food, so that people are in better condition to withstand the heat

PENNSYLVANIA

Personal—Dr Clarence R Phillips Harrisburg, chief of the tuberculosis dispensary of the state department of health and for a number of years county medical director of Dauphin County has resigned

Fined for Unlawful Practice—In the case of the Commonwealth versus Mrs Hattie Shannon, Lock Haven charged with unlawfully prescribing medicine in Clinton County, the defendant is said to have entered a plea of guilty, July 22, and to have been fined $250 and costs, the total being $375

College Items—The campaign for funds conducted by the Woman's Medical College of Pennsylvania in January 1920, brought in something over $221 000 This included the endowment of nine undergraduate scholarships of $5 000 each a lectureship on nervous diseases and $32 000 for the endowment of a chair in preventive medicine in memory of Anna Howard Shaw The balance is to meet various hospital and college needs During the session 1919-1920 the U S Interdepartmental Social Hygiene Board granted $2 550 for assisting to maintain the salary budget in the department of hygiene This grant is increased to $4 050 for the session of 1920-1921——The Medical School of the University of Pennsylvania has received $50 000 by the will of Dr William C Goodell for the establishment of a chair of gynecology The University of Pennsylvania also received from the estate of Jane H Merrill deceased, the sum of $5 018 for the endowment of a scholarship in the medical school to be named the James Cush Merrill Scholarship in memory of her son——Jefferson Medical College has purchased for about $100,000 a plat of ground on which to erect a nurses' home in connection with the college hospital The property adjoining the college building has also been purchased for $30 000 and presented to the college as a gift A country convalescent home free of encumbrance and valued at about $20 000 has been deeded to the Jefferson Hospital This college has also received three gifts of $5 000 each of which the income of one is to be used for the orthopedic department and of the second for the department of pediatrics The third gift is to establish a scholarship in medicine

Philadelphia

Camp for Tuberculous Children—Health Director Furbush has asked for an appropriation of $4 000 to maintain the camp for tuberculous children at Chestnut Hill during the summer The camp has been in operation for a month and has at present in residence forty children aged from 3 to 10 years

Personal—Dr G Ernest Robinson and Dr John P Turner were elected associate chief surgeons of the Frederick Douglass Hospital July 30——Dr James P Sands has been provisionally appointed senior medical officer and Miss Mabel A M Bond occupational therapist, at the Philadelphia Hospital for Mental Diseases

Hospitals to Treat Ex-Service Men Free—Ninety-nine hospitals throughout the state are to cooperate in giving treatment to disabled ex-service men through arrangements planned by the Americanism Commission of the American

Legion The announcement of this plan to give medical aid free to members of the legion was made by Edgar F Baird State Americanism chairman Plans have also been made by the commission whereby care and attention will be given to service men who have been released from hospitals and sent home Interstate cooperation is to be practiced also to enable men discharged from medical institutions here to receive work and attention in other states

CANADA

Committees Formed to Combat Disease—Dr Gordon Bates Toronto, has returned from a month's trip through western Canada His visit was on behalf of the Canadian National Council for Combating Venereal Disease He attended the annual meeting in Vancouver and reports the organization of provincial committees in Manitoba Saskatchewan and Alberta, as well as at points in Ontario and Nova Scotia In Ontario committees have been organized at Toronto, Hamilton and Brantford

Personal—Dr Seymour Hadwin chief pathologist in charge of the biologic laboratory, health of animals department of agriculture, Ottawa, has resigned to accept a similar position in the reindeer investigations of the Bureau of Biological Survey U S Department of Agriculture with headquarters at Unalokleet, Alaska——Dr Alexander Primrose has been selected as the new dean of the faculty of medicine of the University of Toronto succeeding Dr C K Clarke, resigned

Drug Addicts in Canada Decreasing—Dr John A Amyot Toronto deputy minister of public health reports decided success in the efforts of the department of health to stamp out the opium evil in Canada The department has also been successful in breaking up several attempts to form an opium ring in the Dominion The opium and narcotic drug act, passed at the last session of Parliament, will be put into force about September 1 This act requires that all druggists, whether wholesale or retail and all manufacturers shall keep a record of their receipts together with a record of the quantity manufactured and a record of their sales

Canada's Work for Disabled Soldiers—The Department of Soldiers Civil Reestablishment has been giving medical services to all disabled soldiers of the Canadian and British forces resident in Canada or the United States Patients suffering from permanent disability or from recurrence of a disability incident to military service exsoldiers suffering from unpreventable illness within a year after discharge and men undergoing industrial training are the special beneficiaries of the department More than 7 500 patients are now receiving hospital services, approximately 1 850 of these being in tuberculosis hospitals and 770 in hospitals for mental diseases The department operates twenty-nine general hospitals, eleven tuberculosis sanatoriums and two mental hospitals and has definite arrangements with fifty-eight other hospitals and sanatoriums Up to Nov 1, 1919, more than 7,500 had received vocational training 19 125 were then in training, and more than 4,000 had been provided with artificial limbs

GENERAL

Gift for Medical Education—During the year, Mr John D Rockefeller gave an additional $20 000 000 to the general education board to be used in improving medical education in the United States, the income and principal to be distributed within the next fifty years

Fellowships for Negro Physicians—Six fellowships for negro physicians have been provided by Mr Julius Rosenwald of Chicago amounting to $1 200 each These are to pay the expenses of qualified negro students doing graduate work in the fundamental medical sciences

Demonstration of Antiplague Work—Antiplague work is being demonstrated by the U S Public Health Service in cooperation with state health authorities at Galveston Texas Surgeon-General Cumming and Assistant Surgeon-General McLaughlin were in attendance Health officers from all the gulf states were present

Gifts for Courses in Dietetics—The will of the late Capt Joseph Raphael de Lamar of New York provides that his residuary estate be equally divided among the medical schools of Harvard, Columbia and Johns Hopkins Universities these funds to be used for the study of dietetics and the advancement of preventive medicine

Prescription Blank Limitation Held Void—A ruling was made August 6 by Federal Judge Cochran at Lexington Ky holding void National Prohibition Commissioner Kramer's prescription blank limitation for physicians This decision will make it possible for a physician to issue practically an unlimited number of liquor prescriptions so long as he has a permit Means of revoking the permit, if the privileges are abused are provided by law

Venereal Disease Survey—Surveys have just been completed by the U S Public Health Service of medical legal, educational and general cooperative measures in force for combating venereal diseases in 444 of the larger cities of the United States Each community was graded on a basis of a possible 1 000 points In conducting the survey information was obtained in answer to approximately 300 questions regarding local conditions In a great majority of cities venereal diseases were alarmingly prevalent

Site Selected for Leprosarium.—The Public Health Service has recommended the acquisition by the United States government of the leprosarium at St Gabriels Miss At a recent session of the Mississippi legislature a bill was passed authorizing its transfer to the federal government Surgeon-General Cumming made an inspection of the property and found it well adapted for the treatment of leprosy There are at present 100 beds at St Gabriel Should the government take it over, however the capacity will have to be increased

Illegal Practitioners Exposed—Through the information collected at the headquarters of the American Medical Association the Council on Medical Education is in position to expose those practicing either in this country or abroad who may have illegally obtained diplomas from American medical schools One Victor Richard Ratten was found to be practicing at Hobart Tasmania on the basis of a diploma from the Harvey Medical College of Chicago which was shown to have been obtained in an irregular manner Information also collected exposed the illegal character of the diploma and license held by one Philip Dyment who was licensed in Georgia in 1914 and in California in 1915 Dyment's Georgia license was recently revoked and action against him is pending in California

Conference on Venereal Disease—The All-American Conference on Venereal Diseases under the joint auspices of the U S Interdepartmental Hygiene Board U S Public Health Service American Red Cross and American Social Hygiene Association will be held in Washington D C the second week in December This is the first of a series of regional conferences authorized by the International Health Conference held at Cannes France last year Representatives from the Western Hemisphere together with recognized authorities from Europe will attend the gathering with the object of reporting on comparing and evaluating present procedures for the control of venereal diseases The organization is in the hands of an administrative committee composed of four cooperating associations This committee consists of Dr Thomas A Story Dr C C Pearce Dr Livingston Farrand and Dr William F Snow

Bequests and Donations—The following bequests and donations have recently been announced

Mount Sinai Hospital New York City $5 000 Montefiore Home New York City $2 500 by the will of Samuel Hay

Homeopathic Medical Society of the County of Kings Brooklyn a donation of twenty city lots at Freeport Heights for the advancement of homeopathy in that section of the city by Dr and Mrs Otto H Rohde Brooklyn

Presbyterian Hospital Chicago Texas oil stock valued at more than $2 000 000 by the will of George B Harris Chicago

Home for Crippled Children Atlantic City N J $2 000 by the will of Elizabeth T Kenyon

National Stomach Hospital Philadelphia $5 000 and Methodist Hospital and Home for Incurables each $1 000 by the will of Mary J Kenyon

Jewish Hospital Philadelphia $2 000 by the will of Simon F Cohn

Southampton L I (N Y) Hospital about $40 000 the proceeds of a benefit

For the construction of a tuberculosis sanatorium at Ottawa in connection with the City of Ottawa Sanatorium a donation of $100 000 in Victory bonds by Mr and Mrs E C Whitney

National Sanatorium and Hospital for Sick Children Toronto Ont $500 each by the will of Alexander Patterson Toronto

LATIN AMERICA

Influenza Fund in Costa Rica—The government of Costa Rica has provided a fund of 50 000 colones (about $25 000) to combat epidemics of influenza

Retirement of Garcia Valenzuela—The professor of chemistry at the medical school at Santiago Chile Dr V Garcia Valenzuela presented his resignation and retired from the faculty this year

Prize for Work to Be Published by Medical Journal The *Revista Medica de Chile* published by the Sociedad

Medical Society, and an annual prize, to be called the Guzman Cortes prize, has been founded to be given for the best scientific work published in the *Revista* during the current year

Cuban Professors Go Abroad—Dr. Arturo Garcia Casariego, assistant professor of pathologic anatomy and histology of the School of Medicine of the University of Havana has been designated by the government to make a trip abroad to study matters relating to the teaching of these subjects.—Dr. Guillermo Diaz y Macias, professor of practical pharmacy, has also been commissioned by the Cuban government to study the organization of pharmacologic laboratories abroad

FOREIGN

Prize for Work on Hygiene—Dr. L. Muñoz of Madrid has been awarded the Garcia Faria prize of the Spanish Engineering Institute for his work entitled, "Sanitation and Hygienization of Spain"

No More Outings for Vienna Children—A Danish weekly states that owing to the scarcity of coal, the children's trains taking Vienna children to the Scandinavian countries have had to be discontinued, for the present, at least

Palestine Medical Association—The objects of the Palestine Medical Association are to strenghten and coordinate the medical forces of the country to collaborate with physicians outside Palestine to give the medical work a national as well as a humane value to prepare a native soil for Jewish scientists and to help in the creation of the Hebrew University

Medical Journal in Palestine—The first medical journal in Palestine has made its appearance. It is published quarterly by the Medical Association of Palestine and its first issue is dedicated to the memory of the Jewish physicians and nurses who laid down their lives during the years of upheaval in the Holy Land

Alvarenga Prize at Berlin—The topic for competing articles for this prize, in 1921, is the question whether lethargic encephalitis has a place apart by its etiology, clinical manifestations and pathologic anatomy. The award is 2,000 marks and the competing articles must be in the hands of the president of the Hufeland Society, Professor Umber, Kurfurstendamm 45, Berlin before April 1, 1921

International Congress of Comparative Pathology—The first congress of this kind was held at Paris in 1912, and the second meeting was appointed for Rome in 1914. The war caused its postponement but plans are now under way for the second congress to be held at Rome next spring. Prof. E. Perroncito of Turin is chairman of the committee of organization and the secretary is Dr. M. Levi della Vida of the Istituto d'igiene, Via Palermo 58, Rome

Cremation Before Death—Dr. Matsushita introduced a bill supported by twenty-three members of the Japanese diet which provides that bodies must be kept seventy-two hours after death before burial or cremation instead of twenty-four hours as the present law provides. He quoted a cremator from Kyoto who stated that he knew of six cases in which the supposed dead had screamed as the crematory fires reached them. The bill is strenuously opposed by Japanese physicians who state that this is absurd and a direct insult to their profession

The International Urological Society—The *Presse medicale* announces that the officers of this society have now been chosen, and the first meeting is to be held at Paris, July 7-9, 1921. The honorary presidents are Guyon of Paris and Watson of Boston, president H. Fenwick, London, vice presidents, Alessandri of Rome and Keyes, Jr., of New York, secretary Desnos, and treasurer Pasteau both of Paris. The committee in charge of the meeting is headed by Legueu of Paris. Verhoogen of Brussels and Brongersma of Amsterdam. The three questions to be discussed are nephritis with uremia, remote results of trauma of the urethra and pyelography

Proposed Reforms in the Medical Curriculum in Germany—Delegates from the different medical faculties in Germany met at Halle early in the year to confer on the reforms to be introduced in the teaching of medicine. The preliminary report of the proceedings is quoted in the *Munchener medizinische Wochenschrift*. A single standard of a twelve semester course is demanded. In teaching the natural sciences, five of the semesters to be devoted to preclinical studies. In teaching the special needs of the medical students shall be borne constantly in mind. The number of hours devoted to anatomy shall be less than at present but the two-semester course in anatomic dissection shall be retained. Before entering on the clinical studies, two months of test service in attendance on the sick shall be compulsory. During the clinical semesters, ten months of the vacations shall be devoted to practical training as assistant to a physician, *Zwangsfamulieren*. This can be arranged in hospitals and maternities where the chief is connected with a medical school. Examinations must be better managed so as to weed out incompetents. The foregoing requirements are now under discussion by the organized profession.

CORRECTION

Medical and Surgical History of the War—In THE JOURNAL July 24, page 255, is a brief statement about the Medical History of the War. This is substantially correct, with the exception of the list of authors of the different volumes, given in small type underneath the second paragraph. While the names of some of the members of this board are identical with the names of the prospective editors of the different volumes, the actual editors of some of the volumes (which will not be ready for the press inside of two or three years from date) have not yet been definitely determined. The manuscripts of the different volumes are in the hands of the present division chiefs of different sections in the Surgeon-General's Office but the shaping up of the material of these volumes for the press being a matter of time may fall into the hands of different persons from those listed.

Government Services

Chamberlain Succeeds Ashburn on Hygiene Board

Col. Weston P. Chamberlain, M. C. U. S. Army, has been appointed a member of the United States Interdepartmental Social Hygiene Board, succeeding Col. Percy M. Ashburn, M. C., U. S. Army, who has been ordered to a field command.

Army Medical Examinations

Announcement has been made that the results of the examinations of civilian physicians for entrance to the Army would not be available for several months. General Ireland says that returns in a considerable number of the examinations have already reached Washington and that the grades of the applicants were far above the average.

Arrangements for General Gorgas' Funeral

Arrangements for the funeral of the late Major-Gen. William C. Gorgas, Surgeon-General, U. S. Army, were announced August 6 by the War Department. On the arrival of the U. S. Army Transport *Pocahontas* at Hoboken the body was received with military honors and taken to Washington where a military escort conducted it to the Church of the Epiphany, 1317 G Street N.W. There it will lie in state until August 16 at 2:30 p. m. when the funeral services will be held. Interment will be in Arlington National Cemetery with full military honors. The grave of the former Surgeon-General will be near that of Major Walter Reed, who as an Army medical officer demonstrated the transmission of yellow fever by the stegomyia mosquito. It seemed most fitting to Army officials in charge of the arrangements that the remains of these two officers who achieved so much in the suppression of yellow fever should rest in close proximity.

Health Conditions in the Army

Malaria increased during the first six months of 1920 as shown by statistics collected at the Surgeon-General's Office. During the war, when intensive antimalaria cantonment work was being carried on there was a marked decrease in the admission rate for malaria as compared to the rate in the five years immediately prior to the war 1911-1915. But since the close of the war there has been another rise. The records show that many patients treated for malaria in the Army reclapse shortly after return to duty and the Surgeon-General points out that while quinin is rightly regarded as a specific in the treatment of malarial fevers, rest is an important adjunct in the cure of all acute cases.

An epidemic of paratyphoid fever has broken out at Hopewell, Va., a small community located just outside the boundaries of Camp Lee. Fear that the contagion might spread to the troops led to the dispatching of an Army medical officer to conduct an investigation.

Foreign Letters

MEXICO CITY

(From Our Regular Correspondent)

Aug 1, 1920

Plague and Yellow Fever

So far as plague is concerned, the improvement of conditions in Vera Cruz continues as only two new cases have been reported in the last two weeks From the beginning of the epidemic on April 19 to July 30, there have been fifty-six cases, with thirty-four deaths, at present four patients remain in the pest-house Some 50,000 persons have been vaccinated against plague and antirat measures are being carried out actively Among the many rats trapped, some were found infected by the plague bacillus During the last days however, none of the rodents examined have shown signs of plague infection The personal efforts and advice of Dr Carl Mitchell of the United States Public Health Service have been of great assistance in the antiplague campaign, and both the citizens and the public health authorities have expressed their thanks to him The newspapers have dwelt on the fact that the first shipment of antiplague vaccine received was taken to Vera Cruz from New Orleans by an American destroyer which showed the earnest desire of the American government to be of assistance

In Tampico a case of plague occurred which was discovered only after the patient s death Through the examination of the gland juice and the guinea-pig inoculation by Dr A Gochicoa of Tampico, it was ascertained that the case was of plague and the necessary measures were taken As several days have elapsed without any other cases being found and as no case of rat plague has been discovered, it is assumed that the patient went to Tampico from Vera Cruz and died In view of the thorough disinfection of his residence it is confidently expected that the disease will not spread in Tampico

Vera Cruz is now threatened by an epidemic of yellow fever, which had been absent for more than ten years According to newspaper reports several cases of 'black vomit' have occurred The permanent yellow fever service of Vera Cruz has received instructions to enforce thoroughly the isolation of patients, to investigate the presence in the patient s blood of Noguchi's leptospira in order to demonstrate Pfeiffer's phenomenon which would confirm the diagnosis according to Noguchi s view and also to test the curvative value attributed to neo-arsphenamin by Dr de Beaurepaire and other Brazilian physicians (THE JOURNAL Sept. 27, 1919 p 1020), which seems probable, yellow fever being a spirillar disease The Instituto Bacteriologico Nacional has been instructed to proceed with the preparation of a vaccine made from sterile cultures of leptospira This is feasible owing to Dr Noguchi s having presented the laboratory in his recent visit to Mexico with some culture tubes of the germ, which he isolated from patients in the city of Merida It would seem advisable that while the above mentioned laboratory studies are being carried out, Vera Cruz should be considered as yellow fever infected, and nonimmune persons should abstain from visiting that city or if they do so they should take all necessary precautions

Bacterial Vaccines Measured by Weight

In connection with the Vera Cruz epidemic, the city council of the City of Mexico requested Drs Cervera and Perrin to prepare in their private laboratories some plague vaccine Dr Perrin studied carefully the methods in use in different laboratories for measuring the dosage of the vaccine and decided to adopt the one used in the Instituto Oswaldo Cruz of Brazil, where antigens are measured by weight The vaccines delivered by Perrin to the city authorities are measured at the rate of 25 decimilligrams of bacterial bodies desiccated at 100 C, to each cubic centimeter This method is considered accurate and permits graduation of dosage in accordance with weight and other individual requirements of the patient

LONDON

(From Our Regular Correspondent)

July 24 1920

Immediate Disinfection in the Prevention of Venereal Disease

A deputation from the Society for the Prevention of Venereal Disease submitted to Dr Addison minister of health a resolution that as the ministry and public bodies have declined to provide the means of delayed disinfection against venereal disease at ablution centers he should instruct all pharmacists to sell such means of immediate disinfection as are approved by the ministry The society recommended that the ministry should take steps to educate the public in the hygiene of immediate self disinfection Dr J H Sequeira stated that the number of new male patients mostly ex soldiers suffering from syphilis treated at his clinic at the London Hospital in 1919 was 90 per cent more than the number treated in 1918 Sir Archdall Reid said that 40 000 men passed through his hands during the war and up to 1917 there was much syphilis A policy of immediate disinfection was then advocated among the troops the result of which was that venereal disease had virtually disappeared A limited number of public bodies have adopted the policy of the city

In replying Dr Addison said that they did not know whether venereal disease was increasing or not because there were no scientific data on the point They knew that there was a great increase in the patients attending the clinics To justify the ministry in issuing instructions to local authorities and to the public, and to avoid the conflict of opinion an overwhelming case would be necessary They would have to contend with a great wave of public feeling which would suggest that the government was encouraging vice The suggested policy might be successful if thoroughly and scientifically applied But they could not deal with a population of 40 millions on the same basis as that on which Sir Archdall Reid with iron discipline at his command could deal with 2 000 soldiers at one time That was quite different from placing something at the disposal of every citizen with instructions as to use To adopt the proposal of the council toward the population as a whole—boys and girls men and women—would be held he thought with material ground to encourage people to run risks Last year he appointed a strong body of men who reported to him that certain drugs if properly applied were efficacious but if not could not be relied on It also reported that their use would give a false sense of security and encourage the taking of risks In spite of the most careful instructions the issue of packets to soldiers was followed by infection in those who used them Two experimental centers for disinfection against venereal disease had been established under the Manchester corporation and so far the result was encouraging He was watching this experiment with anxiety The ministry would take any practical measure it could thoroughly recommend for the prevention and treatment of the disease and was quite prepared to certain of good results to face novel methods

A National Collection of Type Cultures

The Medical Research Council is about to establish a [illegible] house of bacteria for the use of research workers It is often difficult for them to obtain authentic strains" of various bacteria and protozoa The Lister Institute did much to

past from its own private collection, but British workers had often to depend on the courtesy of colleagues at home or abroad The Pasteur Institute in Paris, for example, had a collection maintained by M Binot Another collection, on a commercial basis, existed at Prague, from which city it has been transferred to the serophysiologic institute of Vienna In America the Museum of National History in New York has kept a culture bureau during the last eight years The new collection will be kept at the Lister Institute The scheme will be under the general direction, on behalf of the Medical Research Council, of Dr J C G Ledingham, a member of the staff of the Lister Institute, while Dr R St John Brooks and Miss M Rhodes have been appointed curator and assistant curator, respectively It is proposed to collect and maintain bacterial and protozoal strains of medical, veterinary and economic importance Subsidiary researches on the viability of bacteria in artificial mediums will be undertaken, the staff will also help in identifying strains received from workers at home and abroad Cultures will be supplied to workers at home or abroad a small charge being made to cover cost and postage It is already possible to supply the commoner types of human infection strains A catalogue will be prepared in due course

The War Collection at the Royal College of Surgeons

Progress is being made with the arrangement of the extensive war collection at the Royal College of Surgeons previously described in THE JOURNAL At present 2,689 specimens have been received Fifteen hundred have been made into preparations mounted, described and placed on exhibition Several hundred more have been examined and dissected and are awaiting the means of being displayed In its final form this magnificent collection which is to be housed at the college, will consist of 2000 wet preparations' illustrating the nature of wounds and diseases to which soldiers are liable under modern conditions of warfare, 300 dried preparations illustrating the character of bone injuries drawings made by artists of clinical and pathologic subjects, particularly those done by Mr A K Maxwell in France roentgenograms from military hospitals and casts models made at special hospitals Prof Arthur Keith Professor Shattock and Mr Beadles have handled and arranged this vast collection

Mr Barker Again

The attempt to obtain for Mr Barker the bonesetter a medical degree from the Archbishop of Canterbury by the exercise of an archaic privilege, has been criticized in a previous letter The archbishop, replying to a petition signed by more than 300 past and present members of Parliament, considers that such a degree would not be of any real value to Mr Barker and expresses a hope that some means may be found of marking the public appreciation of Mr Barker's eminent services to sufferers He adds that some of those who signed the petition were under the impression that by holding a Lambeth medical degree *honoris causa*, Mr Barker would become qualified to practice but that this is a mistake The degree does not give the right to register as a medical practitioner

The secretary of the memorialists is now of the opinion that a better and more adequate way of rewarding Mr Barker would be to procure for him a public title The lay press which leaves nothing to be desired in its efforts to boom Mr Barker now says that he is something far greater than the registered practitioner This reminds one of the story of a certain fox In an interview, Mr Barker said 'I am naturally disappointed at the decision not for my own sake, but for the cause of manipulative surgery I had hoped that the possession of the Lambeth Medical Degree might have invested me with the necessary official status to demonstrate my methods in the surgical schools of this country I firmly believe that the diffusion of a profounder knowledge of manipulative surgery throughout the profession would enable its members to cope far more effectively with many physical disabilities which are the cause of so much unrelieved misery today" This, to say the least, is rather curious, for although the press seems always to be fully at Mr Barker's disposal in advertising his marvelous skill," he has never at any time given the slightest inkling of his methods If he is so anxious to make them known, why does he not publish them? If he wants to demonstrate them there is nothing in the world to prevent him from doing so now If only out of curiosity he could easily get a large medical audience at any hall, but he evidently prefers silence Omne ignotum pro magnifico!

PARIS

(From Our Regular Correspondent)

July 23, 1920

International Congress of Surgery

The fifth International Congress of Surgery was formally opened, in Paris July 19, under the presidency of Dr W W Keen emeritus professor of surgery, Jefferson Medical College Philadelphia Dr Keen in his presidential address on Some Ideas Which Physicians Should Defend," spoke of the professional conscience maintaining that physicians were exercising a profession and not a trade When one works at a trade it is always possible to estimate the value of the services rendered, but the services of our profession can neither be weighed in a balance nor measured by figures We should always maintain our high ideals and we should not seek to obtain profit from our discoveries A new remedy, a novel fracture apparatus, an original method of suture and an innovation in treatment should be as free to all as the air we breathe A fracture apparatus invented in Philadelphia should be free to be employed in Paris or Tokyo, on the Cape or in Buenos Aires A new remedy should be available to physicians and patients in all parts of the world Whether the patient be in Philadelphia, Paris or London, he should not be denied, even for a single day, the benefit of any measure which may ward off death or invalidism But what was particularly interesting in Dr Keen's address was his account of the results obtained in the United States in the campaigns against venereal diseases and alcoholism Speaking of prohibition, he said that despite the short period of time which has elapsed since it went into effect, the movement has brought appreciable results To be sure, private stocks are not yet exhausted the measures of enforcing the act are still defective and those people who are willing to buy alcohol even at the very high prices now prevailing have no difficulty in obtaining a supply The arguments which can be drawn from the results obtained so far are nothing if not convincing Dr Keen quoted the experience in five large hospitals and a large municipal lodging house of New York in the latter the admissions during the first two months of 1919 numbered 22350, during the same months in 1920 under prohibition these figures dropped to 4,607 In Philadelphia, the house of correction, which before the days of prohibition harbored more than 2000 vagabonds and drunkards, has had an average population of from 400 to 500 since the prohibition act went into effect During the first four months of 1920 the savings realized as a result of the decreased number of employees and the accompanying reduction in expenditures for wages, food and other expenses were enough to meet all the outlays for public charity during the balance of the year In the first half of 1919 when alcohol was freely obtainable there were 17,114 arrests for drunkenness in Philadelphia under war prohibition this number dropped to 6509 in the following six months, a decrease of

62 per cent Dr Keen concluded that experiences on a scale such as that furnished by millions of human beings in the United States and in Russia during the first years of the war are absolutely decisive Among a people where total abstinence is practiced there is less drunkenness, less crime, less disease, fewer accidents less expense to city and state Under these conditions, is it not our duty, considering ourselves as a corporation, to conduct an active campaign in favor of absolute prohibition, thereby bringing to pass the resultant happy consequences from the point of view of health and public welfare?

Opposition to Free School Books

Under the law of June 16, 1881, primary public instruction in France is free, and although this does not apply to the accessories of education, such as books, copy books, etc., the municipal councils of most of the large cities have extended it to include these school supplies by voting special appropriations for the purpose Dr L Meyer, medical inspector of schools, recently called attention to the dangers which are entailed by free distribution of school books From the standpoint of hygiene alone it may be readily conceived that books which pass from hand to hand and which are carried by the pupils to their homes in fact, almost everywhere, may harbor great numbers of micro-organisms Dr Meyer suggested as a solution that at the beginning of the school year the parents pay the price of the books and these will then become their property

League of Red Cross Societies

The medical council of the League of Red Cross Societies, of which Drs Roux and Calmette of the Pasteur Institute of Paris are members has just terminated its work in Geneva Among the suggestions adopted by the council the following are worthy of note a recommendation to continue support of the league's campaign against typhus and other contagious diseases, grants and subsidies to laboratories, the creation of child welfare centers and continuance of researches on rickets, organization of an intensive campaign against venereal diseases by regional conferences and scientific and moral propaganda, the establishment of numerous tuberculosis dispensaries, open air schools and sanatoriums The council approved in addition, the antimalarial war in Spain the public health program and investigations in Roumania and Slovakia, it recommended complete international registration of vital statistics by uniform methods and last, the inception of an international journal of public health to serve as a special medium for medicine and hygiene

Death of Professor Guyon

Dr Felix Guyon formerly professor of the Paris medical faculty, has just died at the age of 89 He was born at Saint Denis (Reunion Island), July 21, 1831 studied at the Nantes school of medicine and graduated M D at Paris in 1858 He received the nomination of physician of Paris hospitals in 1862 and of professor agrege in the following year In 1867, Dr Guyon became a member of the staff of Necker Hospital and retained this position until his retirement In 1877 he was made professor of surgical pathology resigning from this chair in 1890 to assume the newly created chair in clinical urology in which he expounded the remarkable teachings that made him known throughout the medical world Professor Guyon joined the Academie de medecine in 1878 and in 1892 he was elected a member of the Academie des sciences Professor Guyon was the author of numerous medical works the best known of which are his clinical lectures and his atlas on diseases of the urinary organs and his clinical lectures on surgical diseases of the bladder and prostate gland

BERLIN

(From Our Regular Correspondent)

July 5 1920

The Infant Mortality Rate

During the war and the revolution the public health was greatly affected The infant mortality rate remained within moderate bounds in the first years of the war being 16 4 15 4 13 6 and 15 5 per cent in 1914 1915 1916 and 1917, respectively, for all Germany Scarlatina diphtheria and typhoid fever were widespread while cholera and typhus were moderately prevalent As early as 1916 the mortality rate of tuberculosis in the civil population showed a considerable increase In Prussia for instance the number of deaths from tuberculosis in women rose from 25 000 in 1914 to 30 000 in 1916, this increase was further augmented in 1917 when 39 000 women died of the disease In Leipzig the tuberculosis mortality rate was 91 6 per cent higher in 1918 than in 1914 A frightful increase occurred in the mortality rate of children in 1917, the increase as compared to the rate for 1913 being 2 4 per cent in infants 49 3 per cent in children aged 2 to 6 and 50 per cent in children aged 6 to 15 in round numbers 50 000 more deaths occurred in children under 15 years of age

Tuberculosis

To counteract the increase of tuberculosis a national tuberculosis act is contemplated for which Professor Kayserling makes the following basic demands 1 The apprehension by means of compulsory notification of all tuberculous patients who may possibly become sources of dissemination, in the first instance all those having an infectious form of pulmonary tuberculosis 2 Establishment of public dispensary clinics where all cases of tuberculosis are to be reported 3 Provision of free sanatorium and domiciliary treatment for all patients with advanced pulmonary tuberculosis who endanger their surroundings 4 Elimination of all infectious tuberculous workmen from industries in which they come in constant contact with children 5 General stipulations regarding the necessary preventive measures in industrial and community life It should be stated that some specialists in public hygiene took certain exceptions to these demands, but the draft of the law has not yet been completed

Venereal Diseases

After the revolution discipline was relaxed and many soldiers infected with venereal diseases escaped from supervision As a natural consequence venereal diseases which had been uncommonly prevalent during the war increased considerably The diagnostic clinics established by the national insurance institutes in 1916 wrought beneficent results by furnishing expert advice to venereal patients free of charge By February 1919 the number of these diagnostic clinics had grown to 125 The important position which this system of supervision and care of venereal diseases had attained may be sensed by the number of patients at the clinics these increased from 4 939 in 1916 to 19 140 in 1917 and 33 000 in 1918 Treatment is generally precluded at these clinics in conformity with the wishes of the great majority of physicians for it was feared that this would deter men from seeking advice Anxiety over a possible decline in the private practice of physicians played a subordinate role Despite the success of the clinics it is considered imperative that venereal diseases be fought in more intensive fashion by national legislation A measure which was recently introduced in the lower house contains the following essential stipulations

Syphilis gonorrhea and chancre are considered venereal diseases in the sense of this act and every infected person who with any of these diseases is compelled to seek medical

ment by a registered physician Parents and guardians are in duty bound to furnish medical care to their infected wards The proper authorities may force persons who are seriously suspected of disseminating the disease to submit to examination at the hands of an authorized physician, to produce a certificate of health, and if conditions warrant, to adopt measures of treatment Any one who despite knowledge of his infection takes an opportunity to transmit his disease is liable to imprisonment for as much as three years, or to more severe punishment, if circumstances warrant The prosecution of married and affianced individuals will be undertaken only on the initiative of the injured party Only physicians registered in Germany are permitted to treat venereal and genital diseases, absent treatment is positively prohibited Quacks who advertise publicly in print, by illustrations or exhibitions, even in veiled form, are liable to punishment, the same with physicians who tender their services in a sordid manner Physicians are in duty bound to instruct their patients regarding the nature and infectiousness of the disease and to furnish an official memorandum If the patient discontinues treatment or his occupational or personal relations prove to be particularly dangerous to others, he may be reported by the physician of a diagnostic clinic Public clinics must be established throughout the country in accordance with definite regulations to be issued later Public health officials and employees are enjoined to secrecy The advertising of remedies, apparatus and methods of treatment of venereal diseases except to physicians, druggists or authorized trade channels or in professional medical and pharmaceutic journals, is a punishable offense Specially severe penal regulations are prescribed for the protection of children against infection by wetnurses, and vice versa The exhibit and advertising of articles for the prevention of venereal disease, provided this is not done in a manner offensive to morals and decency, are permissible

The great majority of physicians are opposed to compulsory notification of venereal diseases The Berlin dermatologic society, while opposing compulsory notification, thinks it is necessary to give physicians the right to make a suitable report in cases in which there is great danger of transmission of the disease, and this attitude has been adopted by the Berlin medical society and other professional organizations Naturally, the endeavor to dam the sources of venereal diseases by rigid regulation of prostitution plays an important role in the campaign The Deutsche Gesellschaft zur Bekampfung der Geschlechtskrankheiten recommended in 1918 that all regulations and orders regarding certain women under control of the morality police be repealed and that the morality police be converted into a purely social and sanitary office

Public Health Activities in the New Government

In public health organization the revolution produced complete innovation, especially in Prussia, where the medical section of the Prussian ministry was transferred to the new ministry of social welfare The sphere of activity of this ministry, which was formed from parts of five other ministries, is divided into three divisions namely social welfare housing and colonization and child welfare The division of social welfare has taken over all the duties of the old medical section especially the sanitary police bath police prostitution police, food inspection medical matriculation examinations (formerly under the ministry of education) sanitary inspection of university clinics and hospitals occupational hygiene, public food supply (medical phases) veterinary inspection, hygiene of mining and transportation The government refused to grant the request of many physicians to establish a Prussian ministry of health with a physician at its head, and the same is true of a national ministry The new ministry of labor has reorganized the section of medical charities and hospitals, which is designed to serve especially for disabled soldiers, more particularly in settling pension claims For this purpose twenty-five general and 360 local districts have been established, and these require the services of about 1,100 physicians Many of the extant hospitals have been converted into national hospitals, and, on the average, four of these are to be found in each general district The professional personnel of the service receives advanced training in medicine at the Kaiser-Wilhelms Akademie für ärztlich-soziales Fursorgewesen, formerly the army medical school

VIENNA

(From Our Regular Correspondent)

July 16, 1920

The Public Hospital Bill in Austria

The Austrian 'National Convention" which represents our parliament at present, is busy with what is termed the 'Hospital and Medical Bill" Among the paragraphs of general interest apart from those pertaining to the administration and financial reconstruction of these institutions, the following are noteworthy A patient cannot be operated on without his verbal or, in certain cases written consent If he is under 18 years of age his legal representative—parent, relative or legitimate guardian—must give his consent If the operation is of such a nature that its postponement would be dangerous to the life of the patient, the operation may be performed without the formal consent The chief surgeon of the ward or of the institute decides as to the necessity of such an urgent operation and is responsible for his decision A postmortem examination on patients who die while under treatment in a hospital will be performed except when a contrary decision is especially expressed by the family of the patient or by himself during his lifetime But such a wish cannot be complied with in cases of obscure or uncertain diagnosis, or when it is necessary owing to an operation s having been performed, naturally necropsies for forensic or sanitary reasons do not fall under this paragraph These will be performed without paying attention to any other wishes Two resolutions were passed by the committee studying the bill as an amendment to it The government is advised to find some means for enabling the medical staff and the nurses to be paid at a rate appropriate to the rise of prices and secondly to find means for the equipment of all Austrian medical schools in such a way that these institutions will flourish and fulfil their aim as places of modern clinical teaching for the benefit of suffering mankind Furthermore a suggestion has been made that the necessity of a health certificate should be incorporated in the bill This would require that, before entering into matrimony each partner of the intended marriage should produce a certificate of health, issued by the magistrates of the usual place of habitation of the party Magistrates would be obliged to keep a record of the health of every inhabitant so far as reported to them by hospitals and physicians in cases of infectious diseases, including syphilis, gonorrhea and tuberculosis as well as mental diseases The technic of these notifications which should be made also to the magistrates of the birthplace of the party and the best and most efficacious way, is now under discussion The severe drawback of such a procedure consists in the possible refusal of patients to consult medical men or hospitals with the resulting danger to public health, if they fear that their ailments may become known to strangers or to a possible matrimonial partner

The Problem of "Restoration of Youth"

Widespread discussion of a scientific publication by Professor Steinach of the Vienna Biologic Institute arose

recently in the lay press This investigator, who has been working on the problem offered by the internal secretion of the sexual glands, reported his success in restoring old male rats to juvenile strength, function and appearance by ligation of the testicular duct of one side, thus causing hypertrophy of the interstitial tissue of the testicle, while the glandular structure of the testicle atrophied Professor Steinach claims that this interstitial stroma is a special organ having specific function like the stroma of the suprarenals He calls it the puberty gland and asserts that the stroma of the ovary has an identical function in the female This puberty gland by its internal secretion produces the specific sexual differentiation of the male and the female This experiment on animals, which it is claimed, has been corroborated by competent investigators, enabled him for instance to change at will the sex of juvenile individuals, he could also 'revive" the generative power of old rats, and acting on his suggestion Dr Lichtenstern a surgeon in this city, has performed the operation on three men who had become old and weak, and whose entire appearance as well as mental condition has since then improved in a most marked way In females, application of appropriate doses of roentgen rays seems to have a similar action, and the beneficial results obtained after some operations, like the ligation of the oviduct or the roentgen-ray treatment of tumors of the adnexa, hitherto not quite open for explanation, seem to deserve to be viewed from a different standpoint as regards the etiology Dr Steinach has also exposed the testicles to roentgen rays This procedure likewise seems to stimulate markedly the puberty gland After the publication of this paper, the widespread interest soon became annoying to its scientific author It was regarded as a 'sensation," and earnest requests by scientists to the lay press were necessary to stop lay comments and to commit the problem to medical hands, where it really belonged One result of the publicity of the method has been most grateful Under the impression of the importance of further investigations in this line, an appeal was made by our leading daily paper to collect funds for the biologic institute where Steinach is working, and this appeal was seconded by Professor Roux Money is coming to both for this purpose

Measures Against Abuse of Hospital Treatment

The organization of the medical profession has turned the attention of directors of our public hospitals, as well as the chiefs of such hospital departments to the fact that a large number of patients enjoying the advantages of hospitals or outpatient departments (ambulatories, dispensaries, etc) are in reality not entitled to these benefits Such institutes are intended in the first place for persons unable to pay for treatment, and in the second place for cases not suited to home treatment when the patients are able to pay for it Therefore the organization earnestly urges all persons in a position to control the working of the institutes to refuse admission to all patients in a position to pay for treatment or belonging to state or municipal or private corporations The latter should be treated by the physician appointed for them Only in cases of emergency, as casualties, accidents or riots should such persons be allowed to turn to hospitals or ambulatories Since nowadays each patient costs the hospital a sum varying between 65 and 150 kronen a day and the technical and chemical appliances and apparatus are so very expensive even the treatment in outpatient departments if the patients do not pay for it, is a severe burden on the funds of the institutes At the same time if members of corporations friendly societies, sick clubs and the like will not be admitted free of charge but have to pay like private patients these corporations will find it more convenient to appoint physicians and specialists for their members, thus giving the profession again the possibility of earning a decent living for decent work A severe drawback and a source of constant dissatisfaction among the profession working in our towns was the custom of country practitioners to send their patients requiring special treatment not to a specialist but to a town hospital These cases were always lost to the private physician The organization has caused a list of all recognized specialists to be circulated among all the practitioners of the country, with full details so that they will be in a position to direct the patient to the proper man with benefit to the physician, the specialist and the patient alike

"Socialization" of the Drug Business

The government has definitely decided to take over all the drugstores and apothecary shops existing in this country and has convocated a committee of experts for the purpose of working out the methods best suited for this aim For a long time public feeling was very adverse to the apothecary shops, because of the high prices of medicines they charged and of the alleged enormous profits thus obtained by these tradesmen to the disadvantage of the ill In spite of the rapid rise of prices of drugs and the chemical constituents of all remedies which in nearly all instances have to be imported from abroad the public found that it was charged too high prices The socialistic influence in the government is still sufficiently strong at least to brag about the desire to improve the matter and it has been decided that within a year all apothecary shops may be bought by the state The owner will receive a compensation amounting to a sum varying between fifteen and twenty times the net profits, the last five years being taken as an average Every apothecary desiring to retire must offer his business to the state and no new license will be granted to private apothecaries Thus, within a certain number of years all private owners will die out so to speak and the whole trade will be owned by the state Then these stores will be run for the state and it is believed that the articles necessary for treatment of patients including the drugs will be cheaper for the public than at present But men in a position to know assert that the government management will result in much higher prices than are in force at present Also the few wholesale drug stores and drug factories existing in this country will be turned over to the state within a reasonable time Already the state controls the trade with alkaloids alcohol and certain chemical substances used in technical process In the near future the alcohol chemical trade will be socialized"

Decreased Population in Austria

The last census of this country's population, taken Dec 31 1919 shows that there were 6 320 000 souls living in Austria on that date or 348 000 less than before the war Vienna itself has lost nearly 200 000 having now 1 810 000 all other towns with the exception of one—the industrial center of the coal and iron mines district—show similar losses of between 5 and 10 per cent of the population The agricultural districts show partly no change partly a slight increase The sex proportion is 53 per cent females and 47 per cent males against 51 and 49 per cent respectively in 1913 The differences against prewar times are not due entirely to the mortality caused by the war as the large emigration is also responsible for the loss because the economic conditions of our mutilated country have prompted many firms and corporations and private persons to shift their occupations and abodes to the neighboring countries The census shows that the number of children between 1 and 6 years diminished by approximately 34 per cent This the prospects for the rebuilding of the country are seen not very encouraging

Marriages

FRANCIS C HERTZOG, Lieut, M C, U S Navy, to Miss Aldie Sundre, of Staten Island, N Y, at Norfolk, Va, recently

JAMES S SIMMONS, Major, M C, U S Army, to Miss Blanche Scott of Graham, N C, at Honolulu, Hawaii, June 29

CHARLES R APPLEGATE Indiana Harbor Ind, to Miss Bertha Mitchell, of Indianapolis, at Highland Park Ill, July 28

NICHOLAS FRANCIS BRECKER, Philadelphia to Miss Mary Holland of Doylestown, Pa, at Pottsville, Pa, July 20

HENRY WALKER DECKER, Lahore Va to Miss Florence Fraser Boston of Warrenton, Va, June 15

ZACK PERRY MITCHELL, Coleraın N C, to Miss Ella Whitlock Taliaferro of Richmond Va, June 9

ERNEST R BROCKING, Indianapolis to Miss Minnie Boyle of Greensburg Ind, in St Louis, July 20

ARMAND GOLDSMITH MCHENRY to Miss Irma Russ both of Monroe, La, in New Orleans July 14

CHARLES ELROY LLEWELLYN Richmond, Va to Miss Pearl Ann Shields of Hampton Va June 12

RICHARD WINGFIELD VAUGHAN to Miss Marguerite Stoltz both of Richmond, Va June 19

WILLIAM SCARFF WILEY to Miss Susan Elizabeth Brown, both of Bristol Va June 24

BERNARD HEWITT KYLE, to Miss Putnam Watkins both of Lynchburg Va, June 16

JACOB PILLER, Paterson N J, to Miss Miriam Liebschutz of New York July 1

CECIL R RIGBY Spartansburg S C to Dr Hallie M Clark, of Baltimore July 26

DABNEY KERR to Miss Eleanor Smith both of Catonsville, Md, August

Deaths

John Henry Carstens ⊕ the well known surgeon and gynecologist of Detroit aged 72 died August 7 from malignant disease after an illness of several months Dr Carstens was born in Kiel Germany and came to America with his parents after the revolution in 1848 He was graduated from Detroit Medical College in 1870 and practiced in Detroit since that time He had been president of the Wayne County Medical Society, the Mississippi Valley Medical Association and the American Association of Obstetricians and Gynecologists. He had been a teacher almost all his professional life lecturing first on minor surgery diseases of the skin and clinical medicine and after running almost the entire gamut of medical teaching served for several years as president of the faculty and professor of abdominal and pelvic surgery in the Detroit College of Medicine He was chief of staff of the Harper Hospital and consulting obstetrician to the Woman's Hospital and the House of Providence Dr Carstens was a good citizen and a man of strong belief in the obligation of public officials to their constituencies He was chairman of the Republican city committee in 1879 and had served also on the board of education and the board of health He was a prolific writer in the fields of gynecology and surgery In Dr Carstens death not only Michigan but the entire country loses one of its most respected and influential leaders in scientific medicine and surgery

Walter H Kirkpatrick, Haven Kan, University Medical College of Kansas City Mo 1908 aged 39 Lieutenant Kan N G, during the World War, discharged May 26 1919 while swimming at a summer resort near Boston recently, died from acute dilatation of the heart

Charles Henry Struble, Dayton Ky Pulte Medical College Cincinnati 1895 aged 47 a member of the Kentucky State Medical Association, Captain M C, U S Army discharged Dec 26 1918 died July 19 after a surgical operation

William A Cracraft, Wheeling W Va (license West Virginia State Board of Health years of practice 1881), aged 76, a practitioner for fifty-three years a Confederate veteran, died in Elm Grove, Wheeling July 22

Charles Duncan Ferguson, Oklahoma Okla, University of Toronto Ont 1901, aged 45, a specialist in diseases of the eye, ear nose and throat, died in Corpus Christi, Texas, June 11 from ruptured aneurysm of the aorta

Thaddeus McLaughlin, Springfield Ohio, Eclectic Medical Institute Cincinnati 1904, aged 42 a member of the Ohio State Medical Association, died, July 24, from a self inflicted wound of the throat

Joseph M Wolfe, Hugo Okla, Memphis (Tenn) Hospital Medical College 1895 aged 59 a member of the State Medical Association of Texas died, July 8 from chronic interstitial nephritis

Van Hurlburt Wilcox, Minneapolis, University of Minnesota Minneapolis 1902, aged 48 a member of the Minnesota State Medical Association, Captain M C, U S Army, died July 20

Ivan Wodrow McDowell, Jr ⊕ Savannah Ga, Medical College of Virginia Richmond, 1908 aged 34, Lieutenant, M C U S N R F died in a hospital in Asheville, N C, July 30

William Sayers Duff, Fort Payne Ala, University of Alabama Mobile 1889 aged 59 a member of the Medical Association of the State of Alabama died July 26, from septicemia

John George Stiefel ⊕ Baltimore, College of Physicians and Surgeons Baltimore 1901 aged 46, a member of the faculty of his alma mater, died July 26 from heart disease

Charles Wesley Baker, Kilgore Ohio College Columbus Ohio 1898, aged 47 Starling Medical grade crossing accident near Denison Ohio was killed in a

Martin Luther Tisdale, Tampa Fla University of Alabama Mobile 1907 aged 39, a member of the Florida Medical Association died July 22 from cerebral hemorrhage

Darsey L Coffindaffer ⊕ Shinston W Va, Medical College of Virginia Richmond 1909 aged 38 was killed in a grade crossing accident at Fairmont W Va July 21

Lewis Prichard, Charleston W Va, University of Michigan Ann Arbor 1867 Bellevue Hospital Medical College, 1876 aged 81, died July 21 from senile debility

Israel Hill, Peggs Okla, University of Arkansas Little Rock a member of the Oklahoma State Medical Association, 1898 aged 61 was killed in a cyclone May 2

David H Thomas, Columbus Ohio College of Physicians and Surgeons Baltimore 1895, aged 52, a coal operator, died July 20 from diabetes

T S Wadsworth, Morgan Utah, College of Physicians and Surgeons Keokuk Iowa 1877, aged 86, died May 1, from cerebral hemorrhage

James Thomas Tonks, Lyme Conn, Eclectic Medical College of the City of New York 1892, aged 67, died in a hospital in Boston July 22

John Biebinger, Indianapolis (license Indiana State Board of Medical Examiners 1897), aged 66, died, May 15, from carcinoma of the liver

Benjamin Franklin Landes, Burlington Ind Eclectic Medical Institute Cincinnati 1879, aged 66, died July 22 from valvular heart disease

George R Harnden, Stillwater Okla, Chicago Homeopathic Medical College 1885, aged 81, died, May 25 from arteriosclerosis

James Lee Herrod, Cabot Ark (license State Medical Board Arkansas 1903), aged 85 a Confederate veteran, died July 22

Felix B Linder, Oxford Miss, Memphis (Tenn) Hospital Medical College 1883, aged 64, died July 6, from cerebral hemorrhage

Robert B Jenks, Yonkers N Y, New York Homeopathic Medical College 1868 aged 75, died July 18 from heart disease

Thomas H B Schooling, Green Castle Mo, College of Physicians and Surgeons Keokuk Iowa 1874, aged 80, died, July 27

Henry Furtney, Orosi Calif College of Physicians and Surgeons Keokuk Iowa 1888 aged 63, died about July 19

Correction.—The notice of the death of Dr Milton S Hopper Gary Ind which appeared in THE JOURNAL of July 24 page 36 is incorrect Dr Hopper writes that he is in good health

⊕ Indicates Fellow of the American Medical Association

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

THE BETHLEHEM LABORATORIES, INC, PREFERRED STOCK

Physicians in various parts of the country have sent in to THE JOURNAL batches of material they have received from the Bethlehem Laboratories, Inc, New York City This concern tells the physician that he has been selected as one of two leading physicians" in his community as entitled 'to an opportunity to share in the profits of our Company" The physician is told further that the Bethlehem Laboratories, Inc 'control the manufacture of Hyclorite" which he is reminded 'has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association" Further, the Bethlehem Laboratories Inc, realizing that the medical profession will be "a great factor in spreading the ethical message of Hyclorite" invites the physician "to share in the profits" of the company With this in mind the Bethlehem Laboratories state that they "have decided to allow one thousand of the leading physicians a three-day option to purchase four shares of the 8% Cumulative Preferred stock $400 00"

Accompanying this letter is a very gaudy 'Stock Subscription Warrant printed in the approved 'gold certificate" orange-colored ink It certifies that the recipient—whose name is filled in—is "entitled to subscribe for FOUR shares of the 8% Preferred Stock of the Bethlehem Laboratories Inc ' by surrendering the "warrant' on or before Aug 1 1920—and paying four hundred dollars! One curious point, which may or may not be significant, is noticed in reference to these 'warrants" All those that THE JOURNAL has received were sent out July 24, 1920, and each warrant" bears a serial number Only one thousand leading physicians," it will be remembered were offered this 'three day option" Yet, the serial numbers of all except one of the 'Stock Subscription Warrants" sent to THE JOURNAL are considerably over one thousand, in fact the numbers on some of the warrants" were well up toward four thousand!

The concern gives a list of the men composing the "directorate of the Bethlehem Laboratories Inc" The chairman of the board of directors and the president of the corporation is a real estate operator of Bethlehem, Pa Its secretary is the cashier of one of the Bethlehem banks Two other men on the directorate are respectively, president and cashier of another Bethlehem bank Another member seems to be in the steel business in Bethlehem Still another is described as a Bethlehem 'capitalist ' The president of the General Laboratories Madison, Wis is yet another member of the board of directors The remaining two men of the board are alleged to be physicians One of them is a Prominent Physician' of Bethlehem Pa and the other is Dr J Jay Reilly, Philadelphia, Prominent Philadelphia Surgeon and Consulting Chemist to several large manufacturing drug concerns' One would suppose that the Biographical Department of the American Medical Association which collects official data on all the physicians of the United States and its possessions would have some data regarding a Prominent Philadelphia Surgeon and Consulting Chemist to several large manufacturing drug concerns' Yet curiously enough no such individual can be found either in the American Medical Directory or in the latest directory of the American Chemical Society

Hyclorite was accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies because at the time it was considered it was marketed in accordance with the Council's rules We know no thing about the Bethlehem Laboratories Inc other than what has been stated, nor do we know whether there is any truth in the claim that this concern controls the manufacture of Hyclorite' As for the investment proposition which the Bethlehem Laboratories Inc makes to physicians it is an insult to decent medical men THE JOURNAL has repeatedly pointed out that when physicians are financially interested in the products they prescribe for or recommend to the sick the public is not getting a square deal The composition and medicinal value of therapeutic agents are not the only factors for the medical profession to take into account, the methods of exploitation may be just as important It is against public interest and a degradation of scientific medicine for physicians to be financially interested in the products they prescribe

Correspondence

CONDITIONS IN THE INDIAN MEDICAL SERVICE

To the Editor —I have recently had occasion to give extended consideration to the medical needs of our native Indian population I visited a number of reservations in continuation of former inquiries including this time the Zuni and Navaho reservations of Arizona and certain Pueblos of New Mexico In my judgment the medical situation is as deplorable as it is disgraceful and I am satisfied that if the facts were known and thoroughly understood the organized medical profession, through the American Medical Association would bring pressure to bear on the government to bring about the required drastic and far-reaching reforms

The matter is apparently one of indifference to the Commissioner of Indian Affairs who had every opportunity of presenting *all* the facts precisely and emphatically in his evidence before the Congressional Committee of Inquiry That evidence does not include as it should, a complete statement of expenditures on account of the Indian Medical Service and all that is properly connected therewith Attention is not drawn to the lamentable underpayment of physicians and nurses on Indian reservations and the total inadequacy of the medical and nursing staff considering the normal needs of the Indian population We are under treaty or humane obligations to the Indian tribes under the control of the Indian office to provide adequate medical assistance but broadly speaking in the case of at least all of the larger reservations such assistance consists of a single physician with possibly a small hospital insufficient to provide proper care or equipped with an insufficient staff of nurses and other help required for the needs of the patients There are no pharmacists connected with the Indian medical service although it is now held and recognized that physicians should not be expected to do their own dispensing or compounding except in cases of emergency

There is no adequate dental service the total number of dentists being less than ten who travel from place to place over an area of vast extent There is no adequate provision for eye specialists although the Indian population is terribly afflicted with trachoma introduced from the outside largely because of negligence and indifference to the risk of infection

In Serial No 6 of the Hearings of the Committee of Indian Affairs is a table which may well bring the blush of shame to a government under obligations to provide a proper Indian medical service and in duty bound to afford those who are rendering such service a means of maintaining a proper standard of life According to this statement of the entire staff of physicians other than the chief medical supervisor who receives a salary of $3000 a year only one physician receives a salary of as much as $1,800 four of $1,600 one of $1,500 twenty two of $1,400 ten of $1,300 and seven over $1,200!

The total number of regular physicians in the service, Jan 1, 1917, was 116, against only seventy-nine, Nov 1, 1918 The number of contract physicians in the service in 1917 was seventy, and in 1918 it was only sixty The best men are leaving the service, not only because of the totally inadequate compensation, but because of a niggardly policy otherwise which places pecuniary burdens on physicians unwilling to let their patients suffer the results

Below the $1 200 line are sixteen physicians who receive from $1,000 to $1,100, twenty-two who receive from $700 to $720, and seventeen from $600 to $660! Still lower payments may be assumed to represent the compensation of contract physicians

These seventy-nine regular physicians Nov 1 1918 (no later data being available through the Indian Office), have the assistance of fifty-five nurses, the number having been reduced from ninety-nine nurses in 1917, also largely because of totally inadequate compensation unduly prolonged hours of work, and often far from satisfactory living accommodations In the statement prepared by the Commissioner of Indian Affairs for the information of the Congressional Committee, it is said, "The personnel of the Indian Health Service is made up of the directorate at Washington D C the supervisory force, the administrative officers at each agency, the physicians and nurses the field matron and all the industrial employees at all schools, agencies and hospitals throughout the entire Indian field, each and all of these persons is intimately concerned *in carrying out some part* of the health program" All of which is contrary to the real facts for most of the staff referred to have other and far more immediately important functions to fulfil and they are neither paid to render sanitary or subsidiary health services nor are they qualified to do so

There is, broadly speaking no Indian health service, and very little is done to prevent the occurrence of disease though some progress has been made in the control of disease after its occurrence through a medical staff unquestionably much better today than at any time in the past This however, is not because of the policy of the government to pay adequately and provide for a medical and nursing staff but because of the earnest desire of the medical officers and associates to be of service The high ideals of these men and women are a credit not only to the service but to the nation as well The situation is so serious that the very existence of certain tribes is at stake Other tribes suffer a decrease or stationary condition of population because of a death rate which would be inconceivable under modern conditions if it were not sustained by the official records

The registration of births and deaths is far from accurate and complete On the Navaho Reservation, which represents one of our finest Indian tribes the death rate from tuberculosis is appalling (2847 per hundred thousand or 48 per cent of all causes) and the frequency of trachoma is not less than 25 per cent The examination of the Indian for tuberculosis is made superficially because the medical staff is not available The sanatorium treatment provided reaches at best, only a fragment of the population The required housing reforms have not been initiated, nor are proper efforts made to instruct the Indians in the rudiments of domestic hygiene. In view of the foregoing which could be much enlarged upon in matters of detail it is obviously the duty of the American Medical Association to concern itself with this question and to insist on radical and far-reaching reforms The Association should inquire into the question of adequate compensation and agree on a schedule of salaries commensurate with the responsible duties performed and it should ascertain the educational status of the physicians among whom there are reasons for believing that there are some not qualified to practice under the state laws

In England, assistant medical officers of health receive a minimum salary of £500 or about $2 500, a year The average health officer receives about £1 000, or $5 000 The chief medical officer of our Indian Medical Service, including more than a quarter of a million Indians, widely scattered over an immense territory, receives a salary of $3 000, or less than what is paid to the veterinary surgeons in the government service to the chief forester of the Indian Service, and the chief irrigation engineer!

It has been suggested that the Indian Medical Service should be transferred to the Public Health Service In my judgment such a transfer is called for by the highest considerations of Indian policy At the present time the Indian is slightly increasing in population, and the danger has probably passed that the Indian race *as a race* will die out, but if important tribes though relatively small in numbers, are to be saved from extinction prompt action on the part of the government is urgently needed

The argument has been advanced by the Commissioner of Indian Affairs that such a transfer would not result in further economies in the Indian medical administration What is required is easily a fourfold expenditure for the present purpose if our treaty obligations in behalf of our Indian wards are to be fulfilled in the spirit if not in the letter of the law It is not a question of economy, but a question of life and death The Commissioner of Indian Affairs in his evidence implies that there is perfect cooperation between the Public Health Service and the Indian Medical Department My own investigations do not prove this to be the case Broadly speaking there is no health service worthy of the name nor effective cooperation with either the state or federal authorities with the possible exception of some extraordinary emergency measures during an outbreak of smallpox or bubonic plague It would therefore seem to me that the American Medical Association should take up the question as to whether the Indian Medical Service should remain where it is at the present time or be transferred to the Public Health Service where it would seem more properly to belong

FREDERICK L HOFFMAN, Newark, N J

[COMMENT—The subject presented in the foregoing communication is not a new one The conditions result from undertaking to provide for the medical care of these wards of the government through a subdivision of a division of a bureau of the Department of the Interior In other words, there is no definite fixing of responsibility for the prevention and cure of disease on Indian reservations What little actually exists rests in a multiplicity of control with all its attending disadvantages The control of matters affecting the health of the Indians which should be the work of especially qualified physicians is in fact, under the direction of laymen who have the authority but who do not possess the necessary knowledge to consider and pass on such subjects The Indian Medical Service has suffered and is suffering from a vicious circle Insufficient compensation has made it impossible to secure and retain the services of a capable and sufficient personnel having a high standard of professional proficiency In turn, stock arguments for economy have seemed to have weight And so the wheel has turned A solution suggested several years ago was the placing of the Indian Medical Service in the United States Public Health Service Here again there is a technical, governmental difficulty The United States Public Health Service is a bureau of the Department of the Treasury whereas the Office of Indian Affairs is in the Department of the Interior The time may come when the federal government will establish a department having as its object the study and control of all matters relating to health Such a department naturally would give deserved consideration to the health of the Indians as well as to that of the other citizens of our country—ED]

UNIFORMITY OF RECORDS IN RADIUM TREATMENT

To the Editor —The following is the report of the Research Committee which was made at the meeting of the Radium Society in April at New Orleans It is the desire of the Research Committee that an accurate and uniform record be kept of all cases treated with radium In this way, uniform statistics may be collected, even though the treatment is given by many different individuals

LEDA J STACY, M D Chairman Rochester, Minn

SCHEDULE SUBMITTED BY RESEARCH COMMITTEE

1 Keeping records of all cases treated
First page short history diagnosis grouping based on physical findings
Second page

Case No	Date of Treatment	Amount of Element or Emanation Screening	Duration	Total Mg Hours or Mc Hours

2 Grouping of cases
A Operable
B Borderline or doubtfully operable
C Inoperable
D Advanced and hopeless
E Recurrences local regional

3 Determination of E S D of each tube of radium The E S D should be the standard of comparison of sensitiveness of the various elementary and diseased tissues

4 The methods of screening and protection of healthy surrounding tissues (*a*) distance (*b*) material used

5 The importance of postmortem examinations and serial sections of organs in toto this being the only means to determine the correctness of the technic and the actual permeability of the rays thereby establishing the actual therapeutic value of radium rays

6 The reexamination of all patients at stated intervals and careful recording of subjective and physical findings at each examination (both visible and palpable)

SYMBOLS FOR EYE PHENOMENA DURING ANESTHESIA

To the Editor —May I ask for your cooperation to secure suggestions for symbols to indicate the several eye phenomena which are observed during anesthesia I venture to submit those which I have used for some years and have given to my students at the Long Island College Hospital Brooklyn

Lid muscular tone present = absent < present and cornea sensitive the sign for present within a ring
Pupil size in mm if light reflex present size within a ring
Eyeballs oscillating ~~ quiet — incoordinated \
Cornea moist M hazy H dry D
Sclera normal + injected X bloodless I

A F ERDMANN, M D, Brooklyn

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

DIACETIC ACID IN URINE

To the Editor —In THE JOURNAL July 17 1920 p 206 is an abstract of an article in the *Medical Journal* of Australia in regard to the ferric chlorid test for diacetic acid in diabetic urine from patients who have been treated with sodium bicarbonate until the urine had become alkaline I had exactly the same experience as Dr Maxwell and performed all the tests and experiments which he mentioned and with the same results about two years ago I have looked through several books on urinalysis and clinical diagnosis and have failed to find mention of this reaction which I think should surely be called to the attention of the various authors I am writing you to ask whether you can suggest any convenient test to take the place of the ferric chlorid test which is useless when once the alkaline treatment has been begun Please reply through THE JOURNAL HENRY YOUNGS M D Goshen N Y

ANSWER—The article to which our correspondent refers is Ferric Chlorid Test for Diacetic Acid in Urine' by L. V. I Maxwell (*Medical Journal of Australia* **1** 458 [May 15] 1920) The reaction to which Maxwell refers is a well known one in inorganic chemistry and is due to the interaction of the ferric chlorid with the carbonate or bicarbonate radical giving rise to a red color which is similar to although not identical with that produced by diacetic acid and ferric chlorid It is strange that reference to this possibility has not been made in any of the textbooks on clinical diagnosis but such is the case so far as we have been able to determine As Maxwell points out the presence of carbonates or bicarbonates must be excluded before the Gerhardt test for diacetic acid may be relied on, as the dosage of alkali may be increased in the hope of overcoming an acidosis which in reality does not exist"

To obviate this fallacy of the ferric chlorid test for diacetic acid in the urine one should acidify the alkaline urine with dilute sulphuric acid and shake out this acid solution with ether which will extract the diacetic acid if present and will decompose the carbonates or bicarbonates and thus withdraw them from the field of action The ethereal solution should now be drawn off with a pipet placed in a second test tube and shaken with water and a few drops of ferric chlorid solution If diacetic acid is present in the original urine a deep red color will be seen in the watery layer This is the simplest method with which we are familiar for overcoming the difficulty mentioned by Maxwell and should be used as a matter of routine

A further test for diacetic acid in urine which is not given by urines alkaline from carbonates or bicarbonates is that of Lipliawsky which is a modification of the older test of Arnold The technic is as follows Six c c of Solution 1 (consisting of 1 gm of para-amido-acetophenon 100 c c of distilled water and 2 c c of concentrated hydrochloric acid) and 3 c c of Solution 2 (consisting of a 1 per cent solution of sodium nitrite) are treated with the same volume of urine, a drop of ammonia is added and the mixture shaken when it assumes a brick-red color According to the probable content of the urine in diacetic acid from 10 drops to 2 c c of this mixture are treated with from 15 to 20 c c of concentrated hydrochloric acid 3 c c of chloroform and from 2 to 4 drops of ferric chlorid solution The test tube is closed with a cork and shaken gently for from one-half to one minute In the presence of traces of diacetic acid the chloroform assumes a characteristic violet coloration while in the absence of this acid the color is yellow or light red This is an extremely delicate and reliable test for diacetic acid in the urine

OPPENHEIM MODIFICATION OF HARDY TREATMENT FOR SCABIES

To the Editor —Kindly advise what is the Oppenheim modification of the Hardy treatment for scabies

E L HILL M D Jacksonville Ill

ANSWER—A modification of Hardy's ointment was employed by Oppenheim for the rapid cure of scabies at the Wilhelminen Hospital Vienna Severe eczema and very diffuse impetigo constitute contraindications to the treatment but not the ordinary forms of eczema and impetigo The treatment is as follows

1 The whole body with the exception of the head is thoroughly anointed with soft soap for fifteen minutes special attention being devoted to the regions of predilection such as the wrist the axillary folds the groin and genitals the buttocks the popliteal space between the fingers and in the bend of the elbow

2 This is followed by a warm bath at 30 C for half an hour during which soft soap is liberally employed with a brush

3 The body is thoroughly dried and anointed with the modified Hardy's ointment (precipitated sulphur 25 potassium carbonate 10 petrolatum 125) the patient is wrapped in a sheet and is covered with a robe

4 After two hours the ointment is rapidly removed with soap in a warm bath, the body is dried and is anointed with zinc oxid ointment

The treatment lasts three hours Meanwhile the patient's linen and if desired the outer clothing also is disinfected with hot air

For children the duration of the treatment varies with the age The inunctions with soft soap should be continued for from five to ten minutes the baths for from ten to twenty minutes

RACIAL DIETS"

To the Editor —In THE JOURNAL July 31 p [illegible] asked a question about literature on the [illegible] of different [illegible] The *Journal of Home Economics* has recently had three articles on Jewish Dietary Problems **11** 47 [illegible] May [illegible] Italian [illegible] **11**: 337 1919 and Wang The Chine [illegible] **12** 59 (Feb) 1920

[illegible]

Chairman Home Economics Department [illegible]

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA Juneau Sept 7 Sec Dr Harry C De Vighne Juneau
HAWAII Honolulu Sept 6 10 Sec Dr L W Bruns 1141 Alakea St Honolulu
ILLINOIS Chicago Sept 20 23 Director Francis W Shepardson State House Springfield
IOWA Des Moines Sept 15 17 Sec Dr Guilford H Sumner Capitol Bldg Des Moines
MASSACHUSETTS Boston Sept 14 16 Sec Dr Walter P Bowers State House Boston
NEW HAMPSHIRE Concord Sept 9 10 Sec Dr Charles Duncan Concord

Indiana February Examination

Dr William T Gott, secretary, Indiana State Board of Medical Registration and Examination, reports the written examination held at Indianapolis, Feb 10-13 1920 The examination covered 15 subjects and included 100 questions An average of 75 per cent was required to pass Of the 38 candidates examined, 37, including 4 osteopaths passed, and 1 osteopath failed The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Loyola University	(1919)	83 8
University of Illinois	(1919)	90
Indiana University (1917) 85 86 88 (1920) 87 88 88 89 89 90 90 91 91 91 92 92 92 93 93 94 94 95		
University of Louisville	(1919) 82	92 8
Johns Hopkins University	(1919)	88
College of Physicians and Surgeons Baltimore	(1913)	89
Harvard University	(1918) 89	91
University of Michigan Medical School	(1918)	89
Washington University	(1918)	86
Eclectic Medical College Cincinnati	(1919)	88
Vanderbilt University	(1914)	85

Alabama April Examination

Dr Samuel W Welch, chairman, Alabama Board of Medical Examiners reports the written examination held at Montgomery, April 6-9 1920 The examination covered 10 subjects and included 100 questions An average of 75 per cent was required to pass Of the 2 candidates examined, 1 passed and 1 failed Two candidates were licensed by reciprocity The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Jefferson Medical College	(1919)	88 3
FAILED		
Birmingham Medical College	(1915)	56 2

College	Year Grad	Reciprocity with
LICENSED BY RECIPROCITY		
Atlantic Medical College of Phys and Surg	(1913)	Georgia
Medical College of Louisiana	(1906)	Louisiana

Idaho April Examination

Hon Robert O Jones commissioner Idaho Department of Law Enforcement reports the written examination held at Boise April 6 1920 The examination covered 11 subjects and included 120 questions An average of 75 per cent was required to pass Of the 13 candidates examined, 11 passed and 2 failed Nine candidates were licensed by reciprocity The following colleges were represented

College	Year Grad	Per Cent
PASSED		
College of Physicians and Surgeons Chicago	(1910)	81
Northwestern University	(1918)	80 2
University of Illinois (1916) 87 3	(1917)	81 7
University of Maryland	(1905)	83
Detroit College of Medicine and Surgery	(1916)	83 4
Columbia University	(1918)	84 7
University of Buffalo	(1901)	84
University of Oregon	(1918)	82 4
Jefferson Medical College	(1912)	85 7
University of Pennsylvania	(1917)	86 3
FAILED		
Hahnemann Medical College and Hospital Chicago	(1897)	*
University of Louisville	(1907)	72

College	Year Grad	Reciprocity with
LICENSED BY RECIPROCITY		
University of Colorado	(1919 2)	Colorado
Rush Medical College	(1917)	California
University of Illinois	(1916)	Utah
Boston University	(1917)	Nevada
John A Creighton Medical College	(1919)	Utah
University of Nebraska	(1918)	Utah
Coll of Phys and Surg in the City of New York	(1831)	Oregon
Jefferson Medical College	(1919)	Utah

* No grade given

Arizona April Examination

Dr Ancil Martin, secretary, Arizona State Board of Medical Examiners reports the written examination held at Phoenix April 6-7, 1920 The examination covered 10 subjects and included 100 questions An average of 75 per cent was required to pass Of the 12 candidates examined 8 passed and 4 failed The following colleges were represented

College	Year Grad	Per Cent
PASSED		
University of Georgia	(1915)	79 1
Northwestern University (1916) 76 7	(1918)	82 9
University of Illinois	(1911)	86 1
University of Maryland	(1903)	83 1
Boston University	(1905)	85 9
Vanderbilt University	(1908)	79 6
Marquette University	(1916)	82 8
FAILED		
College of Physicians and Surgeons Chicago	(1908)	71 4
Southwestern Homeopathic Med College	(1903)	53
University of Louisville	(1893)*	82 4
University of Pennsylvania	(1906)	69 8

* Fell below 60 per cent in bacteriology

Kentucky May Examination

Dr A T McCormack secretary, Kentucky State Board of Health reports the written examination held at Louisville May 17, 1920 The examination covered 11 subjects and included 110 questions An average of 70 per cent was required to pass Thirty candidates were examined, all of whom passed One candidate received a verification license The following colleges were represented

College	Year Grad	Per Cent
PASSED		
University of Arkansas	(1920)	82
Oakland College of Medicine and Surgery	(1920)	89
Chicago Hospital College of Medicine	(1918)	83
Loyola University	(1919)	74
University of Louisville (1919) 71 (1920) 82 83 83 83 84 84 84 84 85 85 86 86 86 87 88 88 88 89 89 90 91		
Eclectic Medical College Cincinnati (1918) 72	(1920) 83	84
Vanderbilt University	(1920)	82

Minnesota April Examination

Dr Thomas S McDavitt Minnesota State Board of Medical Examiners reports the written, oral and practical examinations held at Minneapolis April 6-9 1920 The examination covered 15 subjects and included 80 questions An average of 75 per cent was required to pass Of the 62 candidates examined 61 passed and 1 failed Of 10 physicians who took the reciprocity practical examination, 8 passed and were licensed through reciprocity and 2 failed Nineteen candidates were licensed on army credentials The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Northwestern Univ Med School	(1920)*	87 2
Harvard University	(1915)	86 5
University of Minnesota Med School (1917) 84 1 86 3 89 9 (1918) 87 7 89 (1920*) 85 1 85 6 85 8 86 86 4 86 4(86 6 86 7 87 87 87 1 87 2 87 4 87 7 87 7 88 88 2 88 4 88 7 88 9 88 9 89 89 2 89 3 89 3 89 7 89 8 90 90 90 1 90 1 90 3 90 4 90 5 90 6 90 9 91 91 2 91 3 91 3 91 3 91 6 91 6 92 1 92 3 92 6 92 7 93 1 93 3 93 6		
St Louis University School of Medicine	(1920)	85 4
University of Nebraska	(1919)	87 6
Columbia University	(1919)	87 8
Univ of Pennsylvania School of Med	(1918)	88
FAILED		
University of Louisville	(1911)	66 5

* These candidates have finished the medical course and will obtain the M D degree after they have completed a years internship in a hospital

RECIPROCITY PRACTICAL EXAMINATION

College	Year Grad	Per Cent	Reciprocity with
PASSED			
University of Illinois	(1914)	87 1	Wisconsin
Northwestern Univ Med School (1912) 94 (1916) 95 2	(1918)	86 2	Illinois
Rush Med Coll	(1919)	87 1	Illinois

study of the tendon reflexes in tables are fully described This chapter contains material which should afford to the American neurologist a stimulus for continued careful research of the reflexes The second chapter dealing with injuries to the brain, contains much material on the diagnostic topography of lesions producing hemiplegia, consisting of cases separated into four groups those possessing cortical lesions, lesions of the pyramidal tract in the subcortical regions, lesions in the internal capsule and lesions of the pyramidal tract associated with injury to the basal ganglion

Of particular interest at this time is the contribution on the secondary and late complications of injuries to the brain consisting of epilepsy cerebral abscess, the meningoencephalitides, cerebral hernia and persistent fistulas In the third chapter are described fifteen cases of complete section of the spinal cord These cases were very carefully observed and permit of definite conclusions relative to the changes seen in the tendon and cutaneous reflexes the reflexes of defense sensory changes and disturbances of the bladder Special importance is given to the plantar reflex, which in the cases with complete section of the spinal cord produced flexion of all the toes The chapter on the results of the explosion of shells without producing external injury is a contribution which American neurologists will view with great interest One part alone namely, that dealing with meningeal hemorrhage, in the absence of external injury of which twenty cases are described, is sufficiently striking to merit careful study in the light of the absence in American literature of such observations Many other cases are described in which the examination of the spinal fluid revealed a marked lymphocytosis the symptomatology of which closely followed that of hysteria and was not associated with external wounds

The volume is replete with novel ideas not the least of which is the one that led M Guillain to describe the nervous troubles following chlorin gas intoxication It is one of the most instructive and valuable contributions to the literature of war neurology

ETUDE SUR L EPILEPSIE TRAUMATIQUE Travail du Service de la Clinique des maladies du systeme nerveux a la Salpetriere Par P Behague Paper Pp 320 Paris Louis Arnette 1919

This is another valuable monograph founded on exceptional experience furnished by the great war, the study being based on 439 cases of traumatic epilepsy observed in one service (that of Pierre Marie) at the Salpetriere The figures are impressive in more ways than one and unlike some war material this has been wisely utilized The patients were carefully examined many of them observed for long periods and proper records were made With the knowledge thus gained is correlated the experience and opinions of others all with good judgment and sense of proportion Consequently this brochure contains about all we certainly know about traumatic epilepsy, and is a safe guide In our opinion about the only weak thing in the book is the chapter on pathogenesis The author agrees that the cicatrix is an irritant that causes the convulsions But how does the cicatrix irritate? The author's idea is that it is by means of cerebral expansion which causes pressure on the scar tissue And this expansion is brought about by increased arterial pressure considerably augmented by the peculiar structure of the choroid plexus Just what starts the increase of arterial tension he does not elucidate.

PSYCHOLOGY OF DREAMS By William S Walsh M D Cloth Price $2 50 Pp 361 New York Dodd Mead and Company 1920

Dr Walsh has prepared especially for the general reader a summary of the literature on dreams particularly to aid sufferers from nervous diseases better to understand their mental processes A brief historical sketch cites most of the theories prevalent before the work of Freud This is followed by a discussion of sleep This preliminary matter occupies the first twenty-six pages of the book and all of the remainer is devoted to the dream itself The author has made a good analysis of the literature and his book may be read with interest both by physicians and by laymen

Medicolegal

Rights of Physicians, Associations, Sanatoriums

(Harris v Thomas et al (Texas) 217 S W R 1068)

The Court of Civil Appeals of Texas in affirming an order dissolving a temporary injunction granted the plaintiff, says that he asked that each of the defendants be restrained from interfering with his practice in a certain sanatorium It was the plaintiff's contention that the defendant physicians could refuse business relations with him only as individuals, and in their organized capacity could not influence others against him, that his exclusion from the organization and the defendants' refusal to affiliate with him and holding that his license as an osteopath did not entitle him to fellowship with them influenced others against him and deprived him of the fruits of his preparation as a practitioner But if the defendants were acting to further their legitimate purpose or to advance the practice of their profession this, the court thinks, would be justified even if it had the result claimed by the plaintiff Unless the organization was itself illegal or the methods used by it were wrongful, the plaintiff had no just complaint The county medical association was composed of what is known as regulars the purpose of which, the defendants answered, was not to injure any one but to elevate the standards of practice and advance the science of medicine and surgery It was provided by such association that an applicant for membership must be of good moral character and licensed to practice under the laws of the state of Texas, that he must not support or profess an exclusive system of medicine or advertise as such A voluntary association has the power to enact laws governing the admission of members and to prescribe the necessary qualifications for membership Membership therein is a privilege which the society may accord or withhold at its pleasure with which a court of equity will not interfere even though the arbitrary rejection of the candidate may prejudice his material interest This court thinks that such a society as this county medical association was is legitimate and lawful If it was an organization which was largely composed by the defendant physicians, and if it did directly or indirectly affect the material interest of the plaintiff or in some degree affect him as a nonmember, this would not justify the courts in denouncing it as an illegal or unlawful conspiracy The association had the right to advance its purpose or interest and that of its members by all legitimate means If it deemed the defendant an osteopath and that as such he was supporting an exclusive system the association and its members were within their rights, under its rules in rejecting him as a member They also had a right to refuse to assist him in operations They could, if they deemed it to the interest of medicine or surgery or the welfare of humanity agree among themselves *not to assist him in surgery* if they did so in good faith and with no intent to injure him To compel them to receive him into fellowship and accept his view would be to impose his will on them and to force the medical world to accept his theory of the healing art Courts have no such power Neither can the court see how a rule by the defendant physicians that there should be present at least three physicians at a major operation could affect the plaintiff If they saw proper to burden themselves with such a restriction they alone had a right to have it repealed Nor was the plaintiff justified in relying on the statutes authorizing the licensing of doctors as establishing that the defendant physicians and the affiliated medical associations the state and the American, were illegal in refusing to recognize him in their association, practice etc Furthermore the court believes that it was the right of the sanatorium to refuse business relation with the plaintiff, if it saw proper to do so and also to adopt such regulations as were proper or deemed by it necessary or expedient to improve its efficiency and standards of service therein and to require of those using its equipment that they possess specific medical learning and equipment in order to receive a membership on the medical staff To accomplish this it was at liberty to employ a committee as it did in this case to standardize the sanatorium If in good faith, with no evil intent to injure

or oppress the defendant physicians who were so appointed did formulate the rules of standardization and name the staff as directed, they had the right to do so subject to no other control than the governing authorities of the institution

Duty to Make Proper Diagnosis—Admissible Evidence

(Thorkeldson Nicholson (Minn) 175 N W R 1008)

The Supreme Court of Minnesota, in affirming an order that granted to the plaintiff a new trial after the action had been dismissed at the close of her testimony says it was alleged in the complaint that, her son being seriously ill, she called the defendant to treat him, that the defendant treated him first for grip then for typhoid and lastly for acute kidney trouble, that the patient was not ill with any of such ailments, but was suffering with empyema, and that the defendant carelessly and negligently failed to operate on him for the illness with which he was then suffering Fairly construed the complaint charged the defendant with negligently failing to ascertain his patient's ailment When a physician is called to attend a patient, it becomes one of his first duties to make a proper diagnosis and ascertain the patient s trouble This constitutes a first step in the physician s treatment of his patient If the defendant failed to bring to the diagnosis of his patient s case the proper degree of skill and care so as to enable him to administer the proper remedy, he would be guilty of neglect of duty This was what the complaint charged the defendant with Bearing in mind the fact that a proper diagnosis constitutes a part of proper treatment this court encountered little difficulty in this case

The plaintiff testified that subsequent to the death of her son she said to the defendant "'Dr Nicholson you had the boy for three weeks, and you treated him for three different kinds of sickness and you kept him there until it was too late to get any help for him', and he kind of stooped down his head, and he looked at me and the tears were in his eyes and he says 'Mrs Thorkeldson, I knew that Rudolph had been treated wrong and I know you can punish me for it but it will cost me money and it will cost you money and the mischief is done and you won't get the boy back again''

This conversation, if it occurred, was in the nature of an admission by the defendant against his own interest and was relevant to the issues and, when considered in connection with other evidence in the case, should have been submitted to the jury as bearing on the issues involved The testimony, as it stood at the close of the trial required the case to be submitted to the jury, and the court was justified in granting a new trial

No Inference from Refusal of Examination

(Cornell Great Northern Ry Co et al (Mont) 187 Pac R 902)

The Supreme Court of Montana says that, in this action brought by the plaintiff to recover damages for injury to his left eye, counsel for the defendants requested the court during the trial, to permit physicians present in the courtroom to make a physical examination of the plaintiff in the presence of the jury The request was denied They afterward requested instructions which would have told the jury in effect that the refusal of the plaintiff to submit to the examination at the request of counsel made in open court together with the circumstances might be considered by them and given such weight as they might in their discretion deem proper They insisted that the request and refusal should have gone to the jury under proper instructions to be considered by them as competent evidence on the theory that inasmuch as the episode had taken place in the presence of the jury they should be permitted to consider it as evidence which the plaintiff had in his possession but refused to disclose In other words the plaintiff having refused to submit to the examination which would have resulted in bringing to the knowledge of the jury stronger and more satisfactory evidence of the condition of his eye at the time the other evidence on that point produced by him should be viewed with distrust But the contention was wholly without merit The defendants had no right to make the demand and the plaintiff had a right to refuse to comply with it, under the previous holding of this court

Conviction of Practicing Without License Sustained

(State Bohls (Minn) 1[illegible] N W R 915)

The Supreme Court of Minnesota in affirming an order denying the defendant's motion for a new trial after he was convicted of practicing medicine without a license holds that an indictment charging that at a certain time and place the person named therein did unlawfully practice medicine and for a fee prescribe direct and recommend certain drugs and medicine for the use and medicinal treatmen (of a certain person) without a license so to do states an offense under Section 4981 of the General Statutes of Minnesota of 1913 Nor is it necessary under such statute that the indictment negative the exceptions in the statute, such exceptions not appearing in the enacting clause of the act. The court says that the indictment in this case stated that the drugs and medicine were for the use and medicinal treatment of one William Frank Bedner The undisputed testimony showed that at the time stated in the indictment William Frank Bedner was less than 1 year of age and was ill at the home of his mother who called the defendant over the telephone to come and treat the child and that the the defendant responded to such call examined the child left some medicine for him prescribed further treatment and received a fee of $15 therefor The defendant offered no testimony, nor was there any proof that he was licensed to practice medicine On the trial a druggist of the city was called as a witness He produced sixty prescriptions issued to divers persons in the vicinity which had been filled at his drug store all bearing date during the week mentioned in the indictment The witness testified that these prescriptions all bore the signature of the defendant in his own handwriting with the letters "M D ' appended thereto They were all admitted in evidence over the defendant s objection as bearing on the question whether the defendant held himself out as a practicing physician in the vicinity The supreme court finds no reversible error in the record

Selection of Physician—Refusal to Undergo Operation—Evidence

(Boa v San Francisco Oakland Terminal Rys (Calif) 187 Pac R [illegible])

The Supreme Court of California says that the plaintiff who was 72 years of age suffered a fracture of the neck of the femur One instruction given to the jury told them that if they found that the plaintiff was injured through the negligence of the defendant and that the plaintiff used ordinary care in the selection of a physician and surgeon for the purpose of treating her injuries it would be no defense to show that the physician or surgeon thus selected by her was unskilful or failed to give her the best or proper treatment provided she complied with the directions and submitted to the treatment prescribed by such physician and surgeon That instruction contained a correct statement of the law Improper treatment if proved would be no defense if ordinary care was used by the plaintiff in choosing a physician Consequently there was no error in sustaining objections to various question propounded to a medical witness for the purpose of showing that the plaintiff had not received proper treatment there being no evidence in the case tending to show that any information of lack of skill on the par of the physician chosen was brought to the knowledge of the plaintiff prior to the employment or that she continued with him after being informed of any lack of skill or failure to give proper treatment The evidence excluded should have been received only in the event that there was evidence in the case from which the jury might reasonably have found that the plaintiff was negligent in the choice of a physician

Another instruction informed the jury that in determining whether or not the injuries suffered by the plaintiff were permanent in character they must bear in mind that the law does not require one injured by the negligence of another to undergo a serious or critical operation when it is attended by some risks of failure if [illegible] reasonable diligence in caring for her injuries and able means to prevent aggravation of them and a speedy and complete recovery and a reasonable time

an operation could not be considered in mitigation of damages, even though under the evidence it might lessen the effects of the injury It was argued that the medical evidence introduced at the trial of this case proved that the operation referred to in this instruction, if submitted to by the plaintiff, would have effected a permanent cure It appeared, however, that there was conflicting medical testimony on this point, and, under such circumstances, the giving of this instruction could not be said to have been error

Unquestionably the physical and mental condition of the plaintiff resulting from the accident was material and mental suffering occasioned by any reasonable apprehension of future disability or deformity resulting naturally and proximately from her injury was a proper element to be considered by the jury in assessing the damages The disability apprehended was one arising from the blow occasioned by the defendant's car and could not be considered in any sense remote It followed that the plaintiff had a right to testify as to her belief at the time of the trial that she would be a permanent invalid It was insisted however, that there was error in allowing the plaintiff to state over objection, that various physicians with whom she had talked concerning her injury had informed her that 'in all possibility" she would never recover the use of her limb Even if it be conceded that the advice of physicians regularly retained in the case is a natural result of an injury to the person, the plaintiff failed to show that the physicians expressing the opinion in question had been regularly retained in a professional capacity The statements therefore, could at most be considered as purely casual and not connected with the defendant's wrongful act by an unbroken chain of causation If, therefore as this court thought on its original consideration of this case the plaintiff's mental suffering was to be considered as occasioned by these statements which bore no legal relation to the injury the admission of the testimony was prejudicial error But, while the court is still of the opinion that the admission of the testimony was error, it now holds that it was not prejudicial error the jury having been instructed to consider the objectionable statements solely for the purpose of determining how the plaintiff felt about her condition at the time of the trial and its effect on her mind

Comparing Roentgenograms of Both Knees

(City of Terre Haute v O Neal (Ind) 126 N E R 26)

The Appellate Court of Indiana Division No 1 says that, in this action brought to recover damages alleged to have been sustained by plaintiff O Neal in falling down a negligently covered coalhole in the sidewalk it was contended with reference to the evidence of a physician that the trial court erred in permitting him to state what in his opinion, based on his examination of the plaintiff produced the abnormal condition which he had testified existed in her left knee But this evidence on its face was clearly competent The fact that the record might disclose as the defendant contended that the witness had taken roentgenograms of both the plaintiff's knees and had examined and considered both of such pictures in forming his opinion as to the cause of the abnormal condition of the left knee was not a sufficient basis on which to predicate reversible error

Society Proceedings

COMING MEETINGS

Amer Assn of Electro Therapy & Radiology Atlantic City Sept 14 17
Amer Assn of Obstetricians and Gynecologists Atlantic City Sept 20 22
American Public Health Association San Francisco Sept 13 17
American Roentgen Ray Society Minneapolis Sept 14 17
Colorado State Medical Society Glenwood Springs Sept 7 9
Indiana State Medical Association South Bend Sept 23 25
Kentucky State Medical Association Lexington Sept 27 30
Minnesota State Medical Association St Paul Sept 29 30
Missouri Valley Medical Society of the Omaha Neb Sept 6 7
Utah State Medical Association Ogden Sept 7 8
Washington State Medical Association Tacoma Sept 16 17
Wisconsin State Medical Society of La Crosse Sept 8 10

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Physiology, Baltimore

July 1 1920 52 No 3

Amplification of Action Currents with Electron Tube in Recording with String Galvanometer A Forbes and C Thacher Boston—p 409
*Variations in Respiratory Dead Air Space Due to Changes in Depth of Breathing R G Pearce and D H Hoover Cleveland—p 472
*Subarachnoid and Intra Arterial Administration of Sodium Bicarbonate and Other Electrolytes J B Collip Edmonton Canada—p 483
*Influence of Internal Secretions on Blood Pressure and Formation of Bile A W Downs Montreal—p 498
Chemical Studies on Gastrin Bodies F C Koch A B Luckhardt and R W Keeton, Chicago—p 508
Essentials in Measuring Epinephrin Output Relation to Rate of Denervated Heart G N Stewart and J M Rogoff Cleveland—p 521
*Effect of Splenectomy on Growth in Young S C Henn, Chicago—p 562
*Importance of Vagal and Splanchnic Afferent Impulses on Onset and Course of Tetanin Parathyroprivia W L Palmer Chicago—p 581

Respiratory Dead Air Space—A new method of determining the capacity of the dead air space is described by Pearce and Hoover The percentage composition of the alveolar air can be determined with approximate accuracy from analysis of the expired air and an assumed volume of the dead air space if the depth of breathing is not excessive This method is said to be as reliable as the best direct methods now used for the determination of the percentage composition of alveolar air providing the respiratory volume is large enough to completely wash out the dead air space

Effect of Sodium Bicarbonate on Nerve Cells—It is held by Collip that the bicarbonate ion has a specific stimulatory effect on the nerve cells of the medulla and the motor cells of the anterior horn Disturbance in the concentration of the various kations particularly of the calcium ion within the nervous tissue produces most marked effects

Endocrine and Bile Formation—As a result of his experiments Downs feels inclined to believe that some at least of the endocrine organs exert a specific influence on the secretory activity of the hepatic cells leading to the production of bile The output of bile in the dog is increased by the administration of secretin The output of bile in the dog is decreased by the administration of epinephrin and by mammary orchic ovarian, pancreatic and thymic gland substances The amount of bile secreted is not affected in a constant or definite manner by the substance of the spleen and thyroid gland Blood pressure is raised by epinephrin Blood pressure is lowered by pancreatic substance and the secretin preparation employed A fall of blood pressure, ordinarily preceded by a slight rise is caused by orchic and mammary gland substances Oscillations of blood pressure are caused by ovarian and thyroid gland substances Blood pressure is not usually affected by either splenic or thymic gland substances

Effect of Splenectomy on Growth—Henn shows that the spleen is not essential to the life of young rats, rabbits, kittens and puppies and that splenectomy has a negligible influence on growth of rats rabbits and kittens In dogs splenectomized while young there is a hastening of the coagulation time of blood The younger the animals have their spleens removed, the more rapid is the coagulation time of the blood Corpuscles of young splenectomized dogs have the same property of more strongly resisting hypotonic sodium chlorid solutions, than control and operated control animals, as do animals splenectomized after having reached maturity Accompanying the removal of the spleen there is an increase of Kupffer cells in the liver and changes in lymph glands and bone marrow that indicate a compensatory function on the part of these tissues in supplying a missing factor in blood formation and destruction Male dogs, male and female rats and female rabbits are not rendered sterile through the removal of the spleen while these animals are young

Tetania Parathyropriva—Double vagotomy and splanchnectomy Palmer says have no influence on the onset and course of tetania parathyropriva, neither has artificial gastrointestinal irritation

Archives of Surgery, Chicago

July 1920 **1**, No 1

*Clinical Lecture on Two Cases of Splenectomy for Splenic Anemia Pathologic Changes in Splenic Anemia H Cushing Boston and W G MacCallum Baltimore—p 1
*Diaphragmatic Hernia A D Bevan Chicago—p 23
*Esophageal Diverticula E S Judd Rochester—p 38
*Management of Direct Inguinal Hernia W A Downes New York City—p 53
*Eight Years Experience with Brain Tumors E Sachs St Louis—p 74
*Amputation Neuromas Their Development and Prevention G C Huber Ann Arbor Mich and D Lewis Chicago—p 89
*Postoperative Pulmonary Complications E C Cutler and A M Hunt Boston—p 114
*Second Great Type of Chronic Arthritis L W Ely San Francisco—p 158
*Comparative Study of Sodium Iodid as Opaque Medium in Pyelography D F Cameron Fort Wayne Ind—p 184

Splenectomy for Splenic Anemia—This article is a stenographic report of a clinical lecture to third year students held by Cushing which really conveys the thought that it is most essential to acquire knowledge and judgment by keeping careful notes of cases and published articles A patient with splenic anemia is the subject of the clinical lecture To emphasize that a splenectomy which is suggested as a suitable means of treatment by the student clinician should not be regarded with too much enthusiasm, Cushing gives the history of two patients on whom a splenecomy was performed in 1898 for this condition One patient died ten days after the operation from rupture of an esophageal varix, the other patient is still alive and has served in the literature as an example of cure of splenic anemia by splenectomy the case sometimes having been quoted as "two cases The man has had severe hemorrhages ever since the last in July 1918 Cushing suggests that the operation may have prevented cirrhosis and ascites The pathologic changes in the spleens of these two patients were written up by MacCallum in 1900 but the report was not published In this article it is printed in full and Cushing calls attention to the fact that during he last twenty years little additional knowledge of the pathology of this disease seems to have been acquired

Diaphragmatic Hernia.—Four cases are reported by Bevan, who points out that the clinical picture of diaphragmatic hernia of the stomach is by no means a constant one The picture he has seen has been first stomach distress sometimes daily and sometimes coming on at longer intervals, the daily stomach distress is sometimes associated with pain coming on some time after the ingestion of food simulating somewhat the picture of ulcer sometimes that of gallstone disease and sometimes associated with vomiting simulating the picture of pyloric obstruction Occasionally these patients have pain only at long intervals and then apparently when they have overeaten or eaten something that has disagreed with them perhaps forming a good deal of gas In one of Bevan's cases the pain was particularly excruciating and came on at such irregular intervals as to suggest strongly the possibility of gallstone colic attacks The clinical picture of the cases in which the colon is involved may be suggestive of a beginning obstruction from carcinoma a partial intestinal obstruction relieved by cathartics and enemas with a disappearance of the symptoms and then a recurrence after an interval of days or weeks In cases in which a definite diagnosis of diaphragmatic hernia can be made and the patient presents symptoms which can be ascribed to this lesion unless there is some very strong contraindication an attempt should be made to cure the patient by operation Bevan describes a technic which he has worked out and which has seemed quite satisfactory

Esophageal Diverticulum.—Judd has operated in fifty-four cases of esophageal diverticulum with three deaths Two of the patients died following a one stage operation the third following the first stage of a two stage operation The ultimate functional results have been very satisfactory One patient was operated on for recurrence, and in one or two cases a sound has been passed because the esophagus seemed too small, but in no instance has a stricture developed

Direct Inguinal Hernia—The clinical history of direct inguinal hernia is discussed by Downes and the various operative procedures usually employed are described Downes prefers his modification of the Bassini operation consisting in a complete removal of the sac and the use of the rectus muscle The percentage of failures in direct hernia has been reduced more than half Downes cautions that if the condition of the lower abdominal muscles is such that a fair chance of obtaining a cure cannot be offered the question of operation should be deferred for the time being and the patient advised to take systematic exercises for a period of from six months to one year There is a small but definite group of patients with poorly developed muscles on whom it is not wise to operate for this condition as recurrence is almost certain to follow

Brain Tumor—Of the eighty-five patients seen by Sachs twenty-nine died or 35 5 per cent Eighteen of these twenty-nine deaths were in patients suffering with glioma and sixty-four or a little more than 74 per cent of the patients had tumors other than glioma and the mortality in these cases was only 17 per cent Sachs urges that every brain tumor should be treated on the theory that it may be a glioma and should be grouped with the most urgent cases that need hospital treatment Of the gliomas in his series 26 per cent were readily removable though successful extirpations constituted only 14 per cent

Amputation Neuromas—The results of a large series of animal experiments are reported by Huber and Lewis They believe that a neuroma indicates an attempt which is thwarted or blocked by scar tissue on the part of the neuraxes of a divided nerve to seek the distal segment and thus complete nerve repair When blocked the regenerating neuraxes form spirals and end disks and become irregularly dispersed throughout the connective tissue of the bulb The regenerating neuraxes react on the connective tissue elements of the bulb which as a consequence increase in number and maintain their embryonal characteristics longer than is normally the case The 'swing door or reversed V operation and crush and tie operation do not prevent neuroma formation Any method to be successful must be directed against the neuraxes Absolute alcohol injected into the nerve some distance (from three fourths to 1 inch) above the plane of section is more successful in preventing neuroma formation than any of the other methods ordinarily employed

Postoperative Pulmonary Complications—Fifty five pulmonary complications with eleven deaths in 1 562 operations constitute the study material of Cutler and Hunt Postoperative pulmonary complications constitute a serious menace to any patient who submits to operation Reliable statistics show that one patient in from every thirty to fifty patients operated on no matter what the anesthetic develops a pulmonary complication and one patient among every 150 to 175 patients dies from some such complication The factors responsible for this are complicated and not always preventable but an understanding of the mechanism suggests prophylactic measures Cutler and Hunt believe that embolism from the operative field is the chief factor in the etiology of such complications It is favored by (1) sepsis (2) trauma and (3) the mobility of the part Other factors of varying importance are preexisting lung disease the irritation of the anesthetic and such general factors as old age chilling and poor general condition Such embolism may occur immediately during the operation or during the convalescence and may be the cause equally of pneumonia bronchitis pleurisy empyema lung abscess or fatal pulmonary embolism Inhalation anesthesia on top of an existing lung lesion may be the dominant factor in some cases The following prophylactic measures are suggested (1) a reduction of [illegible] trauma in an effort to produce [illegible] (2) every effort in [illegible] prevention so that [illegible] stream non sepsis avoid if possible [illegible] lesion however slight

Dr. Robert Reiff
U. S. Medical

packs in laparotomies or by widely gaping wounds and by exposure after operation, and (5) to make each case before operation as good a risk as that individual case can be made

Chronic Arthritis—Under this head Ely includes arthritis deformans, osteo-arthritis, hypertrophic arthritis, degenerative arthritis This is the so-called senile form of arthritis, the "chronic rheumatism" of the elderly, the metabolic form of arthritis The essential feature of this type of arthritis is an aseptic necrosis with cavity formation in the bone at a short distance from the joint Infection in the jaws causes only this type of arthritis Mental emotion and disturbed digestion can only be considered as contributing causes, which change the secretions of the mouth, and make the infection in the jaws more active Trauma is effective only as straining a joint already mechanically damaged

Use of Sodium Iodid in Pyelography—The results of a comparative experimental study of the properties of the substances commonly used in pyelography, together with the clinical results obtained with sodium iodid are detailed by Cameron He found that the molar or 13 5 per cent solution of sodium iodid is fully as opaque as the 3 molar, or 25 2 per cent, solution of sodium bromid and is definitely more opaque than the standard neutral thorium solution which is correctly designated as a five-sixteenth molar thorium nitrate solution, but is commonly called the '15 per cent solution The molar, or 13 5 per cent, sodium iodid solution recommended is prepared by dissolving 15 gm of the salt in a sufficient amount of water to make 100 c c The molar sodium iodid solution is not the least expensive of the pyelographic mediums, but it is free from toxic effects and irritation as far as can be determined, is easy of preparation has the lowest viscosity and the lowest osmotic pressure of any mediums so far suggested colloids and emulsions alone excepted, and it exhibits an opacity to roentgen rays which actually increases relatively with increasing penetration of the rays definitely surpassing in this respect, the thorium and bromid solutions

Boston Medical and Surgical Journal

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So Called Lethargic Encephalitis Its Sequels J W Courtney Boston —p 123
Lethargic Encephalitis G E Neuhaus Denver —p 130
Diagnosis and Treatment of Tuberculosis of Genito Urinary Tract A H Crosbie Boston —p 131

Illinois Medical Journal, Oak Park, Ill

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Hospital Standardization C E Humiston Chicago —p 1
Problems in Social Hygiene L A Stone Chicago —p 4
Blood Pressure Conditions as Studied by a General Practitioner F T Hartman Waterloo Ia —p 9
Taking Care of Student's Health at University of Illinois J F Wright Urbana —p 13
Obstetrics J S Templeton Pickneyville —p 15
Problem of Tuberculous Pregnant Women C H Davis Milwaukee —p 17
Need for Closer Relationship and Cooperation between Dentist and Physician as Revealed by Focal Infections C E Smith Dekalb —p 19
What Should We Do with Bladder Tumors? G Kolischer Chicago —p 21
Treatment of Hemorrhage and Shock by Intravenous Solutions of Whole or Citrated Blood and Gum Salt Solution E A Lynwood Chicago —p 22
Pernicious Anemia and Allied Disorders H A Durkin Peoria —p 25

Journal of Biological Chemistry, Baltimore

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*Fat Soluble Growth Promoting Substance in Lard and Cottonseed Oil A L Daniels and R Loughlin Iowa City Ia —p 359
Acidity of Alkali Free and of Commercial Gelatin Solutions H C Patten and T O Kellems Washington D C —p 365
Sedoheptose a New Sugar from Sedum Spectabile F B La Forge Washington D C —p 367
Volemite F B La Forge Washington D C —p 375
Optical Properties of a Series of Heptitols E T Wherry Washington D C —p 377
*Influence of Diet on Anti corbutic Potency of Milk E B Hart H Steenbock and N R Ellis Madison Wis —p 383
Hydrogen Ion Changes in Mosaic Disease of Tobacco Plants and Their Relation to Catalase R B Harvey Washington D C —p 397
*Evidence Indicating a Synthesis of Cholesterol by Infants J L Gamble and K D Blackfan Baltimore —p 401
Degree of Alkalinity Necessary for Phloroglucin Test for Formaldehyd P J Hanzlik Cleveland —p 411
*Experiments on Carbohydrate Metabolism and Diabetes I Intravenous Glucose Tolerance of Dogs F M Allen and M B Wishart New York —p 415
Alkali Reserve of Swine as Affected by Cereal Feeding and Mineral Supplements E B Forbes J O Halverson and J A Schulz Wooster Ohio —p 459
*Occurrence of Water Soluble Vitamin in Some Common Fruits T B Osborne and L B Mendel New Haven Conn —p 465
*Antiscorbutic Property of Vegetables II Experimental Study of Raw Dried Potatoes M H Givens and H B McClugage Rochester N Y —p 491
Neutrality Regulation in Cattle N R Blatherwick Washington D C —p 517
Effect of Anesthetics on Various Cell Activities G Medes and J F McClendon —p 541
*Studies in Nutrition IV Nutritive Value of Peanut Flour as Supplement to Wheat Flour C O Johns and A J Finks Washington D C —p 567
*Metabolic Study of Amyotonia Congenita M R Ziegler and N O Pearce Minneapolis —p 581

Fat Soluble Growth Stimulants—Lard and cottonseed oil contain appreciable amounts of the fat soluble growth stimulant but it is demonstrable only when fairly large amounts are fed

Antiscorbutic Vitamin in Milk.—Evidence is presented by Hart and his associates showing that the concentration of the antiscorbutic vitamin in milk is dependent on the diet Summer pasture milk is much richer in this nutritive factor than dry feed milk or winter-produced milk involving the use in the ration of corn silage or sugar mangels Fifteen c c daily of summer pasture milk imposed on the basal ration used afforded protection against scurvy for twenty weeks to one guinea-pig However, for most individuals this quantity of milk was insufficient for scurvy prevention Fifty c c was a safer limit for complete protection At least 75 c c daily per individual of dry feed milk were needed for complete protection against scurvy The fact that milk produced from such dry feeds as used contained a measure of the antiscorbutic vitamin shows that the dry feeds themselves are not completely devoid of this nutritive factor

Cholesterol Synthesis in Infants—In the experiments reported on by Gamble and Blackfan the relation of the preformed cholesterol in the food to the total cholesterol metabolism was studied in infants by comparing carefully the intake and excretion of cholesterol Analyses of the nonsaponifiable fraction of infants' stools confirmed the observation of Muller that cholesterol is excreted in infants' stools without undergoing to appreciable extent change to coprosterol A method for determining cholesterol in milk and stool samples is described

Action of Pancreatic Hormone in Protein or Fat Metabolism—The experiments reported on by Allen and Wishart afford no evidence of a direct participation of the pancreatic hormone in protein or fat metabolism but their decisiveness is said to be open to question

Water Soluble Vitamin in Orange, Lemon and Grapefruit—According to Osborne and Mendel the fresh juices of the edible parts of the orange lemon and grapefruit contain water soluble (B) vitamin Their potency in this respect is quite similar to that of comparable volumes of cow's milk The efficiency of these fruit juices is not lost by suitable modes of desiccation A sample of grape juice tested was less potent than equal volumes of the fruit juices mentioned The edible portions of apples and pears furnish some water soluble vitamin, the quantity of these fruits necessary to supply this dietary essential is relatively very large, so that from a comparative standpoint they cannot be regarded as rich in this food factor Prunes apparently are richer in the water soluble vitamin From preliminary experiments it seems doubtful whether the juices of the lemon or grapefruit contain more than traces, if any of the fat soluble vitamin Observations on orange juice are indicative of some potency in this vitamin

Antiscorbutic Property of Potatoes—Data are reported by Givens and McClugage concerning the antiscorbutic value of white potatoes subjected to various temperatures and treatments Ten gm of raw white potato have protected the guinea-pigs against scurvy for the duration of the experiment, 129 days The influence of heat on the antiscorbutic vitamin

appears to be related not only to the degree of temperature but to the duration of the treatment, the reaction, the enzymes present, and the manner of heating

Value of Peanut Flour in Bread Making—Bread made with a mixture of 25 parts of peanut flour and 75 parts of wheat flour furnished adequate proteins and water soluble vitamin for normal growth A similar bread containing 15 parts of peanut flour and 85 parts of wheat flour contained proteins and sufficient water soluble vitamin for growth at very nearly the normal rate

Metabolism in Amyotonia Congenita—The significant facts observed by Ziegler and Pearce in the metabolism of a case of amyotonia congenita were (1) a lowered creatinin excretion, in addition to the excretion of creatin on a low protein diet, (2) a normal uric acid excretion, therefore no nucleoprotein broken down (3) an increased rest nitrogen accompanied by an increased neutral sulphur, (4) a normal phosphorus excretion, therefore no bone disintegration, (5) a lowered chlorid excretion

Journal of Experimental Medicine, Baltimore

July 1920 32 No 1

*Treatment of Experimental Pneumococcus Type I Pneumonia in Monkeys with Type I Antipneumococcus Serum R L Cecil and F G Blake Washington D C—p 1
Group of Paratyphoid Bacilli from Animals Closely Resembling Those Found in Man C Tenbroeck Princeton N J—p 19
Bacilli of Hog Cholera Group (Bacillus Cholerae Suis) in Man C Tenbroeck Princeton N J—p 33
*Calcium and Magnesium Metabolism in Leprosy F P Underhill J A Honey L J Bogert and M L Aldrich New Haven Conn—p 41
Calcium and Magnesium Metabolism in Multiple Cartilaginous Exostosis F P Underhill J A Honey and L J Bogert New Haven Conn—p 65
*Experimental Study on Excitation of Infections of Throat S B Grant S Mudd and A Goldman St Louis—p 87
*Homeotransplantation and Autotransplantation of Spleen D Marine and O T Manley Cleveland—p 91

Antipneumococcus Serum Treatment of Experimental Pneumonia—In experimental pneumococcus Type I pneumonia in monkeys, the intravenous injection of Type I antipneumococcus serum exercises a specific therapeutic effect frees the blood promptly and permanently from pneumococci shortens the course of the disease, and greatly moderates its severity Of five monkeys inoculated intratracheally with lethal doses of pneumococcus Type I all developed pneumonia, and all recovered following the administration of Type I antipneumococcus serum, while the controls died Cecil and Blake point out that the earlier the serum is administered the shorter and less severe the pneumonia Frequent injections are also an important factor in obtaining results When serum treatment is instituted late in the disease the injections must usually be continued over a longer period of time in order to achieve success Normal horse serum exerts no beneficial effect whatever in experimental pneumococcus Type I pneumonia

Calcium and Magnesium Metabolism in Monkeys—From the fact that in leprosy there is a definite retention of calcium and that the more advanced the stage of the disease the greater is the degree of retention Underhill and his associates believe that the organism of leprous individuals is in need of calcium Magnesium may also be retained in leprosy but the degree of retention is much less marked than in the case of calcium With the exception of the retention of calcium and magnesium the leprous organism responds to changes in the intake of calcium and magnesium in the same manner as normal individuals The results of this investigation suggest that in leprosy the administration of calcium may be of benefit as an additional therapeutic measure in an endeavor to retard of arrest the progress of the bone changes characteristic of the disease.

Calcium and Magnesium in Cartilaginous Exostosis—The facts enumerated by Underhill and others suggest that in the early stages of exostosis that is during the proliferative cartilage changes the progress of the disease may perhaps be checked by proper dietary procedure, restriction of calcium and magnesium intake

Reaction Hyperemia—Improvements are described by Grant and other in the method of following temperature changes, and thus alterations in vasomotor tone in exposed mucous membranes The palatine tonsils like the palate pharynx and skin react to chilling of the body surface with reflex vasoconstriction and ischemia The hypothesis is advanced that one factor in the beneficial hardening effect of cold bathing and outdoor living with its incident heightened immunity to respiratory infection may be the training of the vasomotor system in the direction of development in the pharynx of a reaction of hyperemia following chilling similar to that observed in the tonsils

Transplantation of Spleen—No instance of survival of spleen homeografts beyond the usual taking and persistence for one or two weeks common to most homeografts was noted by Marine and Manley although the possible advantages of consanguinity age and splenectomy were fully utilized This is in sharp contrast to thyroid sex gland and suprarenal cortex homeografts with which one may expect 10 per cent to survive the thirty day period It suggests that spleen is a stronger antigen and excites a greater degree of immunity more quickly With autografts survival and growth are the rule, and failures are due to technical errors Age is an important factor in the growth of autografts The younger the rabbit the more growth is aided This beneficial effect decreases gradually and becomes negligible after sexual maturity Removal of the spleen is a powerful stimulus to the growth of transplants The effect varies inversely with the age and usually is negligible after sexual maturity The influence of age and splenectomy suggests that the spleen is most important in early life and after sexual maturity is either unimportant or its functions may readily be assumed by other tissues (hematopoietic) Anatomically the spleen is a highly complex structure but biologically all the major elements of the spleen are simple as indicated by the uniform and marked regenerative capacity There is a tendency for grafts to involute or atrophy with age and grafts made in old rabbits without removal of the spleen may undergo complete atrophy Grafts made in young rabbits accompanied by splenectomy have been observed for more than three years and may be said to be permanent There is some evidence that subcutaneous autografts react to infections in the same way as the intact spleen

Journal of General Physiology, Baltimore

July 20 1920 2 No 6

Influence of Substrate Concentration on Rate of Hydrolysis of Proteins by Pepsin J H Northrop New York—p 595
Enzyme Action in Echinodontium Tinctorium Ellis and Everhart H Schmitz Moscow Idaho—p 613
Comparative Studies on Respiration XI Effect of Hydrogen Ion Concentration on Respiration of Penicillium Chrysogenum I G Gustafson Cambridge Mass—p 617
Analysis of Neuromuscular Mechanisms in Chiton W J Crozier Chicago—p 627
Kinetics of Action of Catalase Extract from Marine Algae Note on Oxidase H C Hampton and L G M Baas Beeking Pacific Grove Calif—p 635
Quantitative Laws in Regeneration J Loeb New York—p 651
Reversal of Sign of Charge of Collodion Membranes by Trivalent Cations J Loeb New York—p 659
Ionic Radius and Ionic Efficiency J Loeb New York—p 673

New York Medical Journal

July 31 1920 112 No 5

Anatomic and Physiologic Theories of Plato J Wright Pleasantville N Y—p 141
Epidemic of Typhoid Fever of Water Borne Origin and Carrier Transmission L H Cornwall New York and J I Crawford San Francisco—p 145 To be concluded
Administration of Digitalis T S Hart New York—p 159
Hypertension and Arterial Fibrosis C T H Hall Chicago—p 162
Case of Unilateral Choked Disk F Krauss Philadelphia—p 167
Shifting as an Aid to Version W H Bate New York—p 168
*Nonleukotoxic Properties of Benzyl Benzoate I A Heller and F Steinfeld Philadelphia—p 169
Lobar Pneumonia Complicated by Multiple Arthritis D Greene New York—p 161

Typhoid Epidemic in A. E. F—Cornwall and Crawford describe the epidemic of typhoid which occurred at Camp Hospital No 10 Prauthoy Haute Marne A E F France

Benzyl Benzoate Not Toxic for Rabbits—Physiologic action was found by Heller and Steinfeld to be [illegible] effects on the leukocytes of rabbits Control [illegible]

well known depression of the leukocyte count Therefore, a wide margin of safety is present between the therapeutic doses and the toxic doses of benzyl benzoate

Southern Medical Journal, Birmingham, Ala

July 1920 **13**, No 7

*Etiology of Epilepsy E B Block Atlanta Ga —p 469
*Active Immunization Against Diphtheria J B Sidbury Wilmington N C —p 474
Rest and Exercise in Treatment of Heart Disease J H Pratt Boston —p 481
Transduodenal Lavage and Usefulness of Jutte Tube A L Levin New Orleans —p 490
Patients with Pharyngeal Paralysis Can Swallow Ice Cream When Not Able to Swallow Other Food C H Cargile Bentonville Ark —p 496
Fundamental Knowledge Necessary for Health Officers J N McCormick Louisville —p 498
Minnesota Rural Clinic E J Huenekens Minneapolis —p 501
Toxic Non Exophthalmic Goiter W D Haggard Nashville Tenn —p 506
Value of Radium in Treatment of Bladder Tumors J T Geraghty Baltimore —p 511
*Use of Cautery in Acute Epididymitis J C Vinson Tampa Fla —p 514
Traumatic Dislocation of Both Hips F C Hodgson Atlanta Ga —p 516
Use of Radium in Gynecology W C Gewin, Birmingham Ala —p 517
Case of Traumatic Hernia in Petit s Triangle T H Hancock Atlanta Ga —p 521
Vincent s Disease J J Shea Memphis Tenn —p 524
Radical Mastoid Operation Indications E G Gill Roanoke Va —p 529

Etiology of Epilepsy—A statistical study was made by Block of the etiologic factors, and some general considerations, in 200 cases of epilepsy No attempt is made to prove or disprove anything

Active Immunization Against Diphtheria—Sidbury is convinced that universal application of the Schick test to all children up to 15 years and the administration of toxin-antitoxin to the nonimmunes, and to all children under 2 years, would practically eliminate diphtheria The results of his retests show that the administration of toxin-antitoxin reduces the nonimmunes from 100 per cent positives to 20 or 30 per cent positives at the end of one year

Use of Cautery in Acute Epididymitis—The most dependent point of the scrotum immediately over the swollen globus minor is selected as the site for operation The skin is painted with iodin The scrotum is held taut, the skin and coverings are infiltrated with procain The cautery at white heat is passed through the scrotum into the globus minor, where it is permitted to remain for from sixty to eighty seconds Petrolatum on a sterile dressing is applied to the wound and a suspensory bandage is snugly fitted The patient is permitted to get up from the table and go home immediately Thirty-one patients have been treated by Vinson by this method Without an exception they have experienced an immediate feeling of relief The reaction from the burn has been of short duration The wound has healed in from two to four weeks

Surgery, Gynecology and Obstetrics, Chicago

July 1920 **31**, No 1

*Operative Injury of Common and Hepatic Bile Ducts D N Eisendrath Chicago —p 1
*Surgery and Embryology J E Thompson Galveston Texas —p 18
*Icterus in Ectopic Gestation Modes of Jaundice Production E H Norris St Paul —p 34
Repair of Cranial Defects by Autogenous Cranial Transplant C C Coleman Richmond Va —p 40
*Successful Experimental Homotransplantation of Kidney and Ovary C Dederer Bay City Mich —p 45
*Impacted Fracture of Neck of Femur H Lilienthal New York —p 50
Congenital Absence of Vagina and Uterus M R Robinson New York —p 51
*Artery of Uterine Round Ligament J F Baldwin Columbus Ohio —p 57
*Case of Krukenberg Tumor T L Chapman Duluth Minn —p 58
Some Principles Involved in Treatment of Empyema E A Graham St Louis —p 60
Diet in Pregnancy C E Paddock Chicago —p 71
Cystadenomyoma of Fallopian Tube L B Wetchagit and A G Ellis Bangkok Siam —p 77
Foot Piece for Thomas Splint C W Maxson Baltimore —p 79
Etiology of Ranula R M Lewis Baltimore —p 82
Prolap e of Female Urethra T N Hepburn Hartford Conn —p 83
Esophageal Radium Applicator C W Hanford Chicago —p 84
Imitation of Mechanical Phenomena of Parturition New Obstetrical Machine J A Beruti Buenos Aires Argentine —p 85
Table for Manikin Demonstrations H W Antz New Haven, Conn —p 89
Intestinal Obstruction Following Webster Baldy Operation for Retroversion E P Richardson, Boston —p 90

Operative Injury of Bile Tracts—Eisendrath reviews the literature, analyzes fifty-one cases of injuries of bile ducts, and points out how injury of these ducts may be avoided during operations by following a proper technic

Origin of Ranula—Thompson advances the theory that ranula submaxillary cysts, and deep cervical cysts are derived from vestigial remains of the branchial clefts that the primary cyst is derived from the cervical sinus in relation to the external depression of the second cleft, that the cyst is carried from its original position by the shifting of muscles during the formation of the neck, by which part of the cyst (deep cervical) is carried up to the base of the skull by the palate muscles which are derived from the third and fourth arches, and part carried into the submaxillary region and tongue by the migration of the muscles of the hypoglossal group

Jaundice in Ectopic Gestation—Jaundice is a not uncommon symptom of ectopic gestation It was present in two cases reported by Norris Jaundice is of great importance and may frequently be the symptom which determines the differential diagnosis In these cases it is probably due entirely to the absorption of blood derived pigments produced by the hemolysis of the extravasated blood The blood serum often contains considerable quantities of blood pigment (hemoglobin hematin hemochromogen, hematoidin) Norris suggests that in the progress of the differential diagnosis the blood serum should be studied both grossly and with the aid of the spectroscope

Transplantation of Kidney and Ovary—The left kidney and ovary together with their blood supply were transplanted by Dederer from one puppy to the neck of another of the same litter Circulation through the organs was continuous with the exception of forty-two minutes during which time the organs were simply left out in the air in the field of operation The function of this kidney was demonstrated from time to time, including one test on the twenty-sixth day after operation, when phenolsulphonephthalein was freely excreted appearing in two minutes and forty second after its intravenous administration On the twenty-sixth day the symptoms and signs of intussusception were noticed Intussusception of the lower small intestine was found at operation An acute inflammatory lesion, comprising edema of the intestinal wall and ulceration of the mucous membrane was found at the entering end of the antussuscipiens The affected area was excised and closed by suture The dog died the next day Necropsy showed the signs of distemper particularly a generalized bronchopneumonia The transplanted organs were removed and tested as to transplantability by anastomosing renal vessels to the splenic vessels of another dog Arterial union was satisfactorily made but the venous anastomosis was not accomplished, in a measure because of the development of a dense adventitia The arterial blood which entered the kidney was under considerable pressure because only a portion of it escaped at the site of attempted venous anastomosis However no damage was observed to result from this influx of blood as was shown by microscopic examination of fixed and frozen sections

Impacted Fracture of Neck of Femur—Lilienthal's patient walked from the time of the accident Three weeks after the accident roentgen-ray examination disclosed an impacted fracture of the neck of the right femur

Artery of Round Ligament—According to Baldwin no blood supply reaches the uterus through the round ligament, but a minute artery carries blood from the uterus into the ligament This artery is so small that in the ordinary technic of hysterectomy the round ligament can be cut across with absolute impunity Baldwin points out that this fact should be emphasized and statements to the contrary in textbooks be corrected

Krukenberg Tumor—The primary growth was small, the metastases were enormous in Chapman's case The patient

was only 14 years of age but the clinical picture coincides accurately with the indisputable and best authenticated type of the true Krukenberg tumor There were two tumors one from each ovary, both were solid The growths weighed 6 and 7 pounds, respectively A growth the size of a dollar, or definitely scirrhus-carcinomatus appearance and feel was found on the lower edge of the anterior wall of the stomach, at the middle of the greater curvature The patient died about twenty days after operation, apparently from exhaustion The entire course of her illness from the time enlargement of the abdomen was first noted was less than three months

U S Naval Medical Bulletin, Washington, D C

July 1920 **14** No 3

History of U S Naval Hospital Chelsea Mass 1915 1918 N J Blackwood —p 311
Plan to Increase Efficiency of Hospital Corps Instruction W M Kerr —p 338
*Two Cases of Diabetes Mellitus Seen at U S Naval Hospital New York L F Craver —p 345
Flat Foot in U S Navy C F Painter —p 359
Static Defects of Lower Extremities A A Marsteller —p 365
Satisfactory Treatment of Malaria W H Michael —p 367
Postbellum Navy Recruiting A H Cechla —p 371

Comparison of Allen and Joslin Methods of Treatment of Diabetes—Two cases of diabetes mellitus are reported by Craver which show some interesting comparisons of methods of treatment One patient with a sugar output of from 106 to 125 gm per day, had his sugar output only moderately reduced by the old-fashioned protein-fat diet and developed marked acidosis while with the Allen method of straight starvation followed by alternate feeding and fasting, thirty-four days were required to render the patient sugar free and there was produced thereby considerable acidosis marked weakness and loss of weight The second patient on the other hand, entering with a sugar output of from 300 to 500 gm per day, required only five days to become sugar-free, and at no time had to undergo the discomforts of complete fasting, this result being accomplished by Joslin's method of first eliminating all fat then rapidly diminishing protein, and cutting down carbohydrate last of all This patient remained sugar-free over a period of five days while still getting from 14 to 45 gm of carbohydrate and sugar returned only when the diet had reached carbohydrate 63 gm protein 60 gm, and fat 25 gm At no time did this patient have more than a slight acidosis as indicated by the presence of acetone, but the complete absence of diacetic acid from the urine

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FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Annals of Tropical Medicine and Parasitology, Liverpool

June 30 1920 **14** No 1

Blackwater Fever in Macedonia J F Gaskell —p 3
Nomenclature of Parts of Male Hypopygium of Diptera Nematocera with Special Reference to Mosquitoes F W Edwards —p 23
Various Types of Malarial Infection and Effect of Quinin Treatment Thereon Among Native Population of Malay Archipelago N H Swellengrebel and J M H Swellengrebel de Graaf —p 41
Heat and Stegomyia Fasciata J W S Macfie —p 73
Oral Administration of Quinin or Quinin and Arsenic for Short Period to Young Native Children Infected with Malignant Tertian Malaria J W S Macfie and M W Fraser —p 83
Oral Administration of Quinin Sulphate Twenty Grains to Adult Natives Infected with Malignant Tertian Malaria J W S Macfie p 93
Oral Administration of Quinin Sulphate Ten Grains Daily for Two Consecutive Days Only to Native School Boys Infected with Malignant Tertian Malaria J W S Macfie —p 95
Oral Administration of Quinin Sulphate to Natives Infected with Quartan and Simple Tertian Malaria J W S Macfie —p 111
Results Obtained from Surveys for Breeding Places of Tree Hole Mosquitoes in Liverpool and Neighborhood B Blacklock and H F Carter —p 115
Crossocephalus Zebrae W Yorke and T Southwell —p 127

Archives of Radiology and Electrotherapy, London

June 1920 No 239

Bristol Medico-Chirurgical Journal

June 1920 **37** No 139

*Operation for Cure of Prolapse and Cystocele W C Swayne —p 81
*Causes of Death in Lobar Pneumonia F H Edgeworth —p 88
Case of Erythremia or Splenic Polycythemia G Parker —p 91
Effects of War on Mental Condition of Citizens of Bristol R H Norgate —p 95

Operation for Prolapsus Uteri and Cystocele—Swayne makes a median incision through the vaginal mucous membrane from a point about three quarters of an inch behind the urethral orifice to the midpoint of the reflection of the vaginal mucous membrane from the cervix The vaginal mucous membrane is then incised on each side of the cervix to a point just behind the mesial plane of the uterus the incisions when completed forming a T with a curved top Two lateral flaps are then dissected up roughly triangular in shape and attached by their longer sides The bladder is separated from the uterus as high as may be necessary to expose the bases of the broad ligaments and the dissection carried onward on each side until sufficient space is obtained This suture is then firmly tied so that the cervix is pushed backward and upward and two folds of connective tissue can be seen running from just outside the tied suture to the back of the symphysis forming a well marked triangle with its base at the cervix These folds are then sewn together by means of a continuous suture of medium catgut the bladder being pressed upward with a flat retractor The vaginal flaps are brought together and sutured The cervix may be amputated or the perineum repaired as the necessities of the case may demand

Low Blood Pressure Cause of Death in Lobar Pneumonia—In four of Edgeworth's cases about 3 per cent death occurred apparently as the result of a persistent fall in the blood pressure In three this happened during the fever in one just when the temperature had fallen by crisis to the normal In one case one-third grain of tyramin injected hypodermically raised the blood pressure from 80 to 105 mm Hg within two hours and its administration every four hours the blood pressure up On the other hand in two cases seen for the first time at the end of the crisis with a fallen blood pressure—as estimated by the finger—tyramin failed to prevent death The drug thus seems useful if used directly the blood pressure begins to fall If this has already fallen to a dangerous point no treatment will prevent a fatal termination

Brain, London

May 1920 **43** Part 1

Results of Secondary Suture of Peripheral Nerves J S B Stopford —p 1
Microgyria and its Effects on Other Parts of Central Nervous System W P May —p 26
Psychologic Interpretation of Essential Epilepsy L J Clark —p 38
Psychogalvanic Reflex A Review E Irideaux —p 0

British Journal of Tuberculosis, London

July 1920 **14** No 3

Tuberculosis and Life and Work of Sir William Osler S A Knopf —p 97
Pulmonary Tuberculosis Versus Consumption H B Shaw —p 104
Muscular Changes Occurring in Pulmonary Tuberculosis J Crai MacGown —p 106
Epidemiology of Phthisis W Gordon —p 112
*Von Pirquet Reaction in Pulmonary Tuberculosis W A Muir —p 115
Role of American Red Cross in Tuberculosis Campaign in France During Great War E G Davies —p 120

Value of von Pirquet Test—In the case of adults Muir considered the von Pirquet test as of little value as a diagnostic and prognostic agent except in a very limited number of cases A negative reaction is not proof that a patient is nontuberculous because it may be obtained in advanced cases A markedly positive reaction does not necessarily indicate a good prognosis The reaction is always positive when tubercle bacilli are present in the sputum except in advanced cases The reaction may be negative in 30 per cent of children with pulmonary tuberculosis After sanatorium treatment the percentage may be reduced to 17 the reduction

British Medical Journal, London

July 10 1920 **2** No 3106

State and Future of Medical Practice G Newman—p 33
Consultant W Herringham—p 36
Future of Medical Practice from Standpoint of General Practitioner A Linnell—p 38
Future of Medical Practice from Point of View of Medical Research G Hopkins—p 40
Hospitals E W Morris—p 42

July 17 1920 **2** No 3107

Scope and Equipment of an Anatomic Institute G E Smith—p 67
*Operation for Radical Cure of Inguinal and Femoral Hernia G L Cheatle—p 68
Open Ether without Chill L J Picton—p 69
Acidosis in Disease F G Hopkins—p 69

New Herniotomy—In the method described by Cheatle the patient is placed in the Trendelenburg position, an incision is made to one side of the middle line the rectus abdominis is split longitudinally and the abdominal wall is retracted to the side of the operation The peritoneum is smoothed away by a dry swab from the parietes The operation is conducted without opening the peritoneum The sac between the internal ring and the surface of the peritoneum is delimited by insinuating the forefinger between it and the external iliac artery and vein The sac is ligatured at the peritoneal surface The part of the sac that extends into the inguinal canal is pulled up into the subperitoneal space as far as it will come, tied as low down as possible and then it is allowed to slip back (or is replaced) into the inguinal canal, so that it cannot act as a guide for a recurrent hernia The delimitation of the sac in the subperitoneal space is simplified by packing back the peritoneum with gauze in a direction upward and away from the seat of operation The muscle fibers and their sheath are separately sutured There is nothing to stop a surgeon occluding the internal ring by suture should he desire The younger the patient the great is the simplicity of the operation The operation is not applicable to inguinal hernia in which intestinal adhesions exist within the sac

Dublin Journal of Medical Science

July 1920 **4** No 5

Acute Pneumococcal Lobar Pneumonia H F Moore—p 217
Case of Congenital Cystic Kidneys and Liver Gastric Ulcer Gastro Enterostomy Later Gastric Carcinoma Perforation T G Moorehead—p 232

Glasgow Medical Journal

July 1920 **12** No 1

Lethargic Encephalitis T K Monro—p 1
Infectivity in Acquired Syphilis with Special Reference to Wassermann Reaction Bearing on Administrative Control of Treatment C H Browning—p 13
Surgical Service of Salonika Army J Patrick—p 21
Preventive Mastoidotomy G Young—p 43

Indian Journal of Medical Research, Calcutta

January 1920 **7**, No 3

Estimation of Erythrocyte and Hemoglobin Content of Blood W F Harvey—p 479
Use of Birds as Laboratory Animals W F Harvey—p 492
*Bacteriologic Investigation of Influenza R H Malone—p 495
Production of Indole by Pfeiffer's Bacillus R H Malone—p 519
*Lethargic Encephalitis in Karachi During an Epidemic of Influenza R H Malone and G C Maitra—p 526
*Preparation of Culture Medium Suitable for Growth of Organisms Used as Vaccines D Norris—p 536
Method of Utilizing Natural Amboceptor in Hemolytic Serums in Wassermann Reaction R B Lloyd and R H G C Mitra—p 545
Bionomics of Houseflies I Outdoor Feeding Habits of Houseflies with Special Reference to Musca Promisca P R Awati—p 548
Id II Attraction of Houseflies to Different Colors P R Awati—p 553
Id III Attraction of Houseflies to Certain Fermenting and Putrefying Substances P R Awati and C S Swaminath—p 560
Occurrence of Coleoptera in Human Intestine R A S White—p 568
Correlation Between Chemical Composition of Anthelmintics and Their Therapeutic Values in Connection with Hookworm Inquiry in Madras Presidency J F Cairns and K S Mhaskar
II Oleum Chenopodii—p 570
III Oleum Absinthii—p 602
IV Oleum Tanaceti—p 606
Malaria in Kashmir C A Gill—p 610
Relationship of Malaria and Rainfall C A Gill—p 618
Pathogenesis of Deficiency Disease V Effects of Some Food Deficiencies and Excesses on Thyroid Gland R McCarrison—p 633
Secretion and Epithelial Regeneration in Mid Intestine of Tabanus F W Cragg—p 648

Bacteriology of Influenza—Malone found that 92 per cent of the strains of Pfeiffer's bacillus tested produce indol when grown in suitable culture mediums No other hemophilic organism present in the respiratory tract of healthy persons or of influenza patients is known to possess this property Therefore, the indol reaction can be used as a means of identifying Pfeiffer's bacillus in pure cultures, and recognizing its presence in mixed cultures A method described by Malone is claimed to be more accurate and more easily applied than the laboratory methods usually employed for the recognition of Pfeiffer's bacillus in the secretions of the respiratory tract of influenza patients Malone claims that a transparent solid medium containing heated blood is more satisfactory for the isolation and identification of Pfeiffer's bacillus than ordinary blood agar Heated pigeon's blood has given the best results in his experience Ordinary blood agar (human, rabbit or sheep) was used for isolating pneumococci and streptococci

Lethargic Encephalitis and Influenza—The history of ten cases seen by Malone and Maitra failed to record an attack of influenza, and in one case only was there influenza in the family Moderate leukocytosis occurred in all the cases with a definite increase of polymorphonuclear cells The total leukocyte count varied but little during the illness, but as the patient's condition improved there was noted a decrease in the polymorphonuclear neutrophils and a relative increase in the eosinophils and small monocytes The cerebrospinal fluid of every case was clear but contained an excess of globulin There was no increase of cells

Groundnut Culture Medium—The preparation of a culture medium from caseinogen (groundnut press cake) is described by Norris and the results obtained from it are compared with those given by a meat medium

Effect of Vitamin Deficiency on Thyroid—McCarrison's studies have shown that dietaries deficient in vitamins lead to a reduction in size and weight of the thyroid gland and render it susceptible to the noxious action of intestinal bacteria, or of their products, with resultant atrophic and necrotic changes A scorbutic diet of crushed oats and autoclaved milk may cause in guinea-pigs considerable enlargement of the thyroid in the main the result of congestion and hemorrhagic infiltration of its tissues Dietaries containing adequate provision of vitamins, but excessively rich in proteins and fats induce in the thyroid of pigeons in confinement marked degrees of hyperplasia, the extent of the hyperplasia being largely dependent on the duration of the organs' exposure to the goitrigenous influences induced by the excessive protein and fat content of the food The addition of onions to a dietary excessively rich in protein and fats while containing at the same time an abundance of vitamins, markedly retards the development of thyroid hyperplasia, and the tendency to acinar budding in pigeons living in confinement The beneficial influence of the onions is held to be due in part at least to their action in restraining the growth of putrefactive types of bacteria in the gastrointestinal tract and in retarding the absorption of their products It is suggested that succus alii might prove of benefit in restraining the thyroid hyperplasia of exophthalmic goiter The changes in the parathyroids induced by a diet deficient in vitamins and excessively rich in starch and fat appear to be related in their origin to intestinal anaerobes, the noxious action of which is greatly favored by the defective diet

Journal of Laryngology, Rhinology and Otology, London

July 1920 **35** No 7

Dental Cysts of Superior Maxilla Their Surgical Treatment M Sourdille—p 193
Case of Labyrinthitis Diffuse Purulent Meningitis Labyrinthotomy Recovery with Intravenous and Intrathecal Injections of Colloidal Silver P W Williams—p 197
Antral Infection and Manganese E W Williams—p 199
Aqueduct of Fallopius and Facial Paralysis D McKenzie—p 201

Journal of State Medicine, London

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Royal Institute of Public Health V Sandhurst—p 193

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State and Future of Medical Practice G Newman—p 111
Myoclonic Form of Acute Epidemic Encephalitis A W M Ellis—p 114
*Suppression of Urine in Pregnancy and Puerperium R Jardine and A M Kennedy—p 116
*Hemorrhage Following Operative Treatment of Internal Hemorrhoids W B Gabriel—p 121
Complement Fixation Test in Gonorrhea W Wagner—p 123
Removal of Metallic Foreign Bodies C F Bailey—p 125
Infection with Organisms of Vincent's Angina Following Man Bite P H Hennessy and W Fletcher—p 127
A Case of Phocomelus C Homi—p 128

Suppression of Urine Caused by Cortical Necrosis in Kidney—Six of twelve cases of suppression of urine in pregnancy seen by Jardine and Kennedy were proved by postmortem examinations to be due to symmetrical necrosis of *the renal cortex. All these patients suffered from what is* known as the toxemia of pregnancy

Hemorrhage Following Hemorrhoid Operations—Gabriel's paper is based on an analysis of 500 cases of internal hemorrhoids. Ligation was performed in 470 cases, the clamp and cautery method in eighteen and Whitehead's operation in twelve cases. Of the three cases of intermediate hemorrhage requiring treatment two followed a ligature and one a Whitehead's operation. Five cases of serious secondary hemorrhage followed a ligature operation, four on the seventh and one on the eighth day after operation. In addition there were eight other cases of slight secondary hemorrhage after defecation, of no special consequence and requiring very little treatment, seven of these followed a ligature operation. Plugging the rectum with a vulcanite or rubber tube Gabriel found is the most generally efficient method of controlling the hemorrhage which is to be combined with suitable general treatment.

Medical Journal of South Africa, Johannesburg

April 1920 15, No 9

Hyperpiesia G D Maynard—p 198
Treatment of Syphilis H Gluckman—p 201

South African Medical Record, Cape Town

June 12 1920 18 No 11

Polymyositis Secondary to Furunculosis A W Burton—p 202
Experiences in East African Campaign R D A Douglas—p 205

Tubercle, London

July 1920 1, No 10

Some Clinical Characters of Tubercle W C Rivers—p 451
Pretuberculous Child F G Collins—p 454

Annales de Medecine, Paris

1920 7 No 5

*The Intrapleural Pressure H Flurin and J Rousseau—p 327
*Tetany from Hemorrhage in Parathyroids V Cordier—p 346
*Anaphylaxis M Kopaczewski—p 361
Supraclavicular Hollow as Sign of Isolated Paralysis of Serratus Magnus G Guillain and E Libert—p 383

Intrapleural Tension—Flurin and Rousseau present evidence that most of the physical and functional signs of an *effusion in the pleura and several of the mishaps for which* thoracocentesis is held responsible are in reality due to modifications of the intrapleural tension. By doing thoracocentesis without attempting to aspirate the effusion the pressure rights itself and there is no danger of mishaps and the patient does not become fatigued. He reclines on his back, the edge of the thorax close to the edge of the bed. The puncture is made in the sixth or seventh interspace as close as possible to the posterior axillary line and all of the fluid is allowed to escape spontaneously. The tension at the close was always found normal.

Tetany from Hemorrhage in Parathyroids—In Cordier's case the man of 41 with chronic dysentery and paroxysmal pains in the neck suddenly developed tetany of the arms and hands and necropsy disclosed a hematoma in the tracheothyroid space which had destroyed the right parathyroids with hemorrhages in the left parathyroids. *Cordier comments* on the rarity of hemorrhages in the parathyroids in adults in comparison to its frequency in children. Vanase has reported finding them in 37 per cent of children most in those with exaggerated electric irritability but Cordier knows of only one other case of spontaneous tetany in an adult with destruction of the parathyroids demonstrated at necropsy.

Anaphylaxis.—Kopaczewski reports from the Pasteur Institute at Paris experimental and clinical research commenced in 1915 which has thrown new light on the nature of anaphylaxis and on means to ward it off. He found first that the toxic shock could be induced by contact of the serum with pectin a nonnitrogenous substance and Bordet demonstrated the same with pararabin and Schmidt with starch—all free from nitrogen. The ultramicroscope revealed that when the serum had thus been rendered toxic its micellar structure changes that is the ultimate molecular mass of protoplasm becomes agglutinated. This agglomeration occurs exclusively in toxic serums and does not occur if the toxicity is prevented by the action of antiflaking factors. He reiterates that *this is a specific phenomenon. The flaking of the micella* seems to be the cause of the morbid phenomena and they can be prevented by preventing the flaking of the serum either by reducing the superficial tension or increasing the viscosity of the fluid before bringing the serum into contact with the colloidal substance or suspension of bacteria. His research further demonstrated that only colloidal substances in the gel state of a certain structure and with a pronounced electronegative charge were capable of this toxic action. All these facts he says constitute a solid experimental basis for the assumption of a colloidal flaking which by obstructing the capillaries suspends the vital functions.

Archives Medicales Belges, Liege

November 1919 72 No 11 Issued June 1920

*Electric Tests in Diagnosis R Marchal—p 417
Sanitary Colonies for the Tuberculous H Famiel—p 420
Symptomatic Value of Nystagmus M Stassen—p 432

December 1919 72 No 12

History of Military Hospital at Rouen L. Wilmaers—p 467
Phlegmon of Orbit After Influenzal Pneumonia M Danis—p 494
Miners' Nystagmus M Stassen—p 498

Electrodiagnosis—Marchal warns that even when the reaction of degeneration is total the prognosis must not be based on this alone while a partial reaction of degeneration permits a favorable prognosis. He recalls further that the waves of the galvanic and the faradic stimulus are of different lengths and time must be allowed for this in estimating the responses. Faradic bipolar exploration is usually all that is necessary for preliminary classification of cases.

Bulletin de l'Academie de Medecine, Paris

June 8 1920 83 No 2

Treatment of Genital Prolapse S Mercade—p 523
Postoperative Jejunal Ulcer V Pauchet—p 527
Schick Reaction P F Armand Delille and P J Marie—p 530
Bacteriology of Black Tongue V Sartory—p [illegible]

June 22 1920 83 No [illegible]

Trauma of Anterior Segment of Eye Frenkel—p 557
Preventive Medicine and Medical Institute L Bernard and Delorme—p 557

Treatment of Genital Prolapse—Mercade sutures the levator ani muscles together through the roof of the anterior vagina in treatment of prolapse of the uterus and here reports a case in which after vaginal hysterectomy he sutured these muscles together all the way from the bladder to the rectum. This provides a solid floor for the pelvis.

Postoperative Jejunal Ulcer—Pauchet found scrap of suture material in five of seven postoperative ulcers at the site of the anastomosis even when the nonabsorbable suture material had been used only for the second suture. Since then he uses only catgut but suggests that nonabsorbable material might be used for suturing the mucosa as this would certainly be sloughed off in time. Hyperacidity was the rule in his eleven cases of jejunal ulcers and for this reason he tries to reduce the secreting area of the stomach in operating on this organ or makes the anastomosis as far *from the pylorus as possible. In one case the ulcer developed* at the point where the clamp had been applied and was the same shape and size as the impression of the clamp. Exposure of the mucosa from clamp and fingers or subsequent a hem-

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

SUKRO-SERUM AND APHLEGMATOL

Report of the Council on Pharmacy and Chemistry

Two years ago, American newspapers contained accounts of an alleged cure for pulmonary tuberculosis "discovered" by Prof Domenico Lo Monaco of Rome, Italy At that time no reference to the "cure' could be found in medical journals which had come from Italy and other European countries (THE JOURNAL A M A., July 13, 1918, p 142) Later, reports were published of experiments carried out in Italy, according to which the intramuscular injection of solutions of sugar (saccharose—cane sugar) diminished pulmonary secretion and was of considerable value in the treatment of tuberculosis (THE JOURNAL A M A Sept 28 1918, p 1083) On the whole, the reports of the trial of what has been called the Italian Sugar Cure for Consumption have been unfavorable At a meeting in Paris in October, 1918, Drs Louis Renon and Mignot reported that they had found that the disease in guineapigs was not modified by the treatment and with humans, the results were also negative (Paris Letter, THE JOURNAL A M A, Nov 23, 1918, p 1760)

In view of the exploitation of this treatment in the United States by the Anglo-French Drug Co, which offers "Sukro-Serum," and by G Giambalvo & Co, which sells "Aphlegmatol," and because of inquiries received, the Council has authorized publication of the statement which follows

W A. PUCKNER, Secretary

A circular issued by the Anglo-French Drug Co describes "Sukro-Serum" as a "Sterilized Solution of lacto-gluco-saccharose ' By reading the circular to the end, however, one learns that 'Sukro-Serum' is not a "serum" in the ordinary sense but apparently it is a solution of ordinary sugar (sucrose) "Sukro-Serum is a sterilized, specially prepared solution of Saccharose"

Sukro-Serum has been advertised (*N Y Med Jour* Sept. 6, 1919) as an INTRAMUSCULAR INJECTION FOR TUBERCULOSIS' " ready for use in cases of Pulmonary and general Tuberculosis" with the assertion that "It is quite certain that in the near future Sukro-Serum will be largely used and its value fully recognized' The circular received from the Anglo-French Drug Co contains quotations from an article by Professor Lo Monaco in the *British Medical Journal* (Aug 24, 1918) setting forth the merits of intramuscular injections of sucrose in tuberculosis It is recommended that 'Neocaine-Surrenine (which the Anglo-French Drug Co supplies) be used for the control of pain when Sukro-Serum is injected

The circular enclosed with a package of "Aphlegmatol ' purchased from G Giambalvo & Co, contained the following with reference to the composition of this preparation

A solution of Hydrats of Carbon After the formula of Prof D Lo Monaco Director of the Institut of Physiological Chemistry of the Univer ity Of Rome Contents *Sucrose* ($C_1H_{22}O_{11}$) *Glucose and Galactose* ($C_6H_{12}O_6$)

The package contained ampules of thin, fragile, brown colored glass, containing approximately 2½ c c of light, clear, amber colored, thick, sticky fluid having a distinct caramel odor Reaction $p_H = 5.0$ A reducing substance (probably glucose) amounting to 7.4 per cent was found by using Benedict s method for estimating glucose quantitatively, after hydrolysis with hydrochloric acid, 55 5 per cent glucose was found There was no reaction for albumin No attempt was made to identify the sugars, as it seemed probable that in the preparation caramel had been produced

The circular which accompanied the package of Aphlegmatol contained the following information (spelling and composition as in original) about its use and effects

To be employed wherever a large bronchial secretion is present in the respiratory branches disease The secretion will diminuish and in non complicated cases it will completly disappear

Fever cough hemottisis night prespiration vomiting and difficulty of breating are in the meantime diminuished

Aphlegmatol acts also as a riconstituent being itself a nurrishing composition improves the digestive function of the body and increases the arterial pressure

5 c c (2 Phials) of Aphlegmatol per day must be injected intra muscularly in the Gluteus

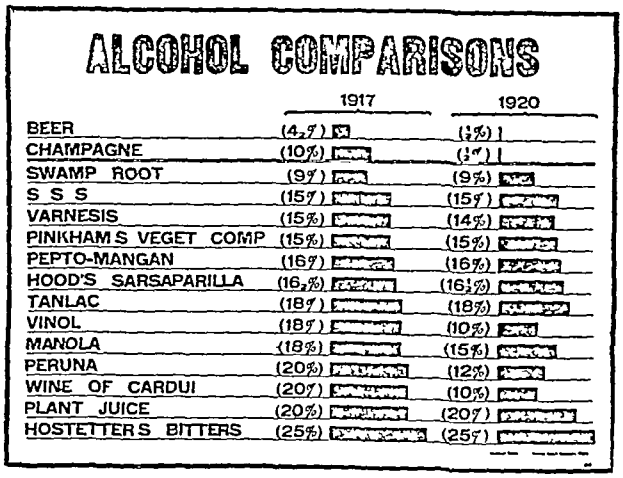
If the patient wishes two injections may be made one at the right immediatly followed by a second one at the left

The cure must not be interrupted untill sometime after expectoration has desappeared which result may be obtained only after fifty or sixty days in the meantime the patient must be controlled by his home physician especialy when thermal elevation of the body takes place

Improvement will be manifested on or about the tenth day of the first injection

In the advertising circular, which is apparently intended for general distribution, much the same information is given as in the sheet enclosed with the ampules, except that in the directions we find "If the injections are painful—especially in cases where patients are very emaciated—*physicians are advised to inject* together with *Aphlegmatol* as an anesthetic a vial with 1 c c solution of Stovain at 3%' The advertising for Aphlegmatol contains many misspelled words and appears to be the work of those ignorant of the English language

Tuberculosis is a widespread disease and a majority of the uninformed are only too willing and ready to try such a "cure" The preparations appear to be nothing more than concentrated solutions of sugar It is probable that a small amount of cane sugar might be inverted to glucose and fructose but experiments have shown that cane sugar subcutaneously administered in the small amounts used in this instance is largely excreted in the urine unchanged Less is known about galactose, but the evidence available would indicate that galactose is largely excreted in the urine unchanged when given subcutaneously Glucose would be absorbed as such, and the amounts under consideration, used by the system much the same as when given by mouth



Miniature reproduction of one of the educational posters prepared by the Propaganda Department of THE JOURNAL The originals measure 22 by 28 inches

What Is a Health Center?—The term "health center" has been very loosely used as a name for everything from a milk station to a miniature health department A real health center should be a complete health department In a small city the health department should be the health center In larger cities health centers should be established for the purpose of decentralizing official health activity and linking with it every agency carrying on public health activities within the area It should also serve as a common headquarters in order to effect the closest cooperation with workers for sociologic and economic betterment—A J McLaughlin, *Public Health Rep* April 30, 1920

Correspondence

DISEASE TRANSMISSION AND THE SCHOOL

To the Editor —In the *Weekly Health Review* of May 29, 1920, published by the Department of Health, City of Detroit, and edited by Mr George F Palmer, epidemiologist, appears an article entitled 'Age and Disease" which expresses such unusual opinions regarding the problem of communicable diseases in the schools that I feel obliged to take exception to it This is all the more necessary when it is appreciated that the article emanates from no less authority than the department of health of one of our largest American cities Doubtless many readers, lacking a medical perspective or failing to study the article, will assume the statements to be authoritative instead of purely speculative

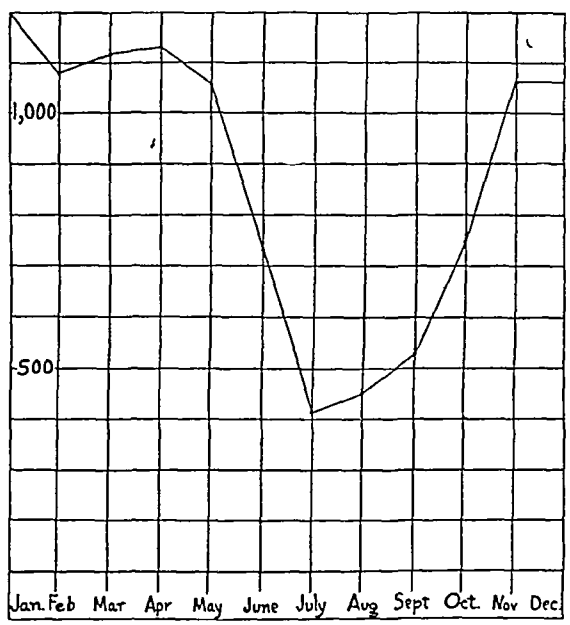
The article opens with the statement that "There are more cases of scarlet fever, diphtheria, measles and chickenpox reported among 6-year old children than at any other time during life This is the experience in Detroit during 1919" Based on these statistics the question is asked 'Does this mean that there is actually more disease among children just entering school or that more disease is discovered at this time? Judging from the number of cases discovered by school nurses in the homes, it would seem as though schooling does not produce more disease It simply reveals more disease"

Then follows a table of statistics expressing in percentages the incidence of these diseases by age groups, the actual number of cases on which the study is based is not given however It is shown that there is a gradual increase in incidence which reaches its peak at 6 years, followed by a decline which is slightly more abrupt Certain of the diseases are then discussed in an effort to show that the school is of minor, if of any importance, in their spread In speaking of scarlet fever the statement is made that "increasing motility and traveling radius with advancing age would seem to have more influence than the act of entering school, for the increase at 6 over 5 or 5 over 4 is no greater than the increments below these ages This applies to diphtheria as well' Again "In measles the increase at 5 and 6 is more abrupt School in this case undoubtedly brings many more cases to light There is no reason to believe that it is responsible for spreading measles" Still further it is stated that chickenpox resembles measles in that the reported cases are more numerous at the age of entering school Here, also it would seem that school attendance is responsible for discovering rather than spreading the disease" In conclusion, this generalization is made 'It would appear from the above that the exclusion from school of children above 10 years or at least 12 years because a younger brother or sister has some minor contagion, would hardly justify the time lost from school'

For our present purpose we will assume that the statistics on which this study is based are sufficiently large to warrant conclusions, and on this basis we will inquire into the justification of the conclusions that have been reached First let us consider the modes of transmission of these infections and whether the school can be a potent agent in furthering such transmission

All modern authorities agree that these diseases never originate spontaneously but are always transmitted to the well, especially by those in whom the disease is passing from the stage of incubation to the stage of expression, by those having the disease in a mild and unrecognizable form or by those termed healthy carriers The usual course of transmission is by direct contact, this is true in such a large proportion of the cases that we need not consider the indirect or mediate methods here

Certainly the school is a fruitful field for direct contact, for hours at a time the pupils are within the zone of droplet infection one with another All pupils are possible disseminators of such infections They are drawn together in the school from a rather large geographic area compared with the restricted area covered by playmates at home It is easy to understand, therefore, how such a disease as scarlet fever may pass from one neighborhood to another through the school



Monthly incidence of scarlet fever representing medium prevalence for thirteen years in Pennsylvania

The author of the report in question constantly belittles the importance of the school as a factor in the transmission of these diseases but he also states that 'increasing motility and traveling radius' exert a decided influence Certainly he must have in mind that *increasing motility and traveling radius*" exert their influence in the same ratio as they increase direct contact If the contact by this means is important, it is hard to follow the reasoning that leads the author to ignore the innumerable direct contacts in school

Have we any concrete evidence that points toward the school as a disseminator of disease?

A review of the morbidity statistics for the Commonwealth of Pennsylvania covering a period of thirteen years shows that scarlet fever, for example varies in its monthly incidence in precisely the same way year after year In June there is always a rapid decline in incidence, reaching the lowest level in July or August, followed by a rather sharp rise beginning in September and mounting to its apex in January (as shown in the accompanying chart) Almost the same type of morbidity curve is found for diphtheria Certainly the opening of the schools about September 1 must account for a considerable part of this morbidity rise The only material change in the daily routine of a child during the month of September from that of August is his attendance at school during five or six hours a day In view of the ease with which direct contact can play its role in the school we are justified in concluding that the school does aid very materially in increasing the incidence of disease

I would further point out that the cases which develop as a result of school contact may propagate the disease in the home We see frequently families in which the mother by endless care, has succeeded in protecting her children from these infections until the time comes for the eldest child to enter school There he falls heir to lurking measles scarle

fever or what not, and carries the disease home, where a household epidemic at once results. The cases that develop in the preschool age certainly are directly assignable to the school, and yet the author of "Age and Disease" seems to consider the school as an institution hermetically sealed from the home, and indicates no appreciation of the role which the school plays as a sort of exchange center for diseases.

The last paragraph of the article quoted concludes that the exclusion from school of children above 10 or 12 years because a younger brother or sister has some minor contagion would hardly justify the time lost from school. The "minor contagions" apparently referred to include scarlet fever, diphtheria, measles, whooping cough and chickenpox.

No modifying statements are made which lead us to believe that the author would favor the removal of this older child to an uninfected residence, it is not suggested that he be excluded from school even during the incubation period, nor does it seem to make any material difference whether or not the child is immune to the disease in question. We can therefore only assume that the author recommends that children above 10 to 12 years who are household contacts should be permitted to attend school from the infected household. The possibility of transmission of these diseases by a third person is thereby categorically denied. It does not seem to occur to the author that this child of 10 or more years may become a healthy carrier or himself develop the disease. Yet, in a typical year such as 1915, our morbidity statistics in Pennsylvania show that 25.7 per cent of the 9,860 cases of scarlet fever occurred in the age group 10 to 19 years and that 18.5 per cent of the 14,645 cases of diphtheria occurred in the same age group.

From such an experience I can only see a serious danger threatening the community which would subscribe to the views expressed in 'Age and Disease.'

GEORGE K. STRODE, B.S., M.D., Harrisburg, Pa.
Chief, Division of School Health, Pennsylvania Department of Health

WHY PROPRIETARIES FLOURISH

To the Editor:—The following experiences seem to add one more to the many reasons offered to explain why proprietaries and ready-made preparations flourish at the expense of the official drugs and preparations. A few days ago I prescribed Troches of Ammonium Chlorid, U. S. P., for a patient of exceptional perseverance. The next day he had not yet secured the troches and told me that he had submitted the prescription to seven pharmacies, including the largest, and three of the best known and admittedly the best equipped in New York. All told him that these troches were 'Not being made any more" and that they were therefore unable to supply him. He thereupon communicated with one of the largest wholesale manufacturing pharmaceutical houses in America and received precisely the same answer. I then took the matter up with a first class pharmacist whom I knew and induced him to prepare this difficult (!) troche for which the U. S. Pharmacopeia gives the following directions: "Rub the powders together until they are thoroughly mixed, then form a mass with syrup of tolu and divide."

Seven pharmacists declined to fill a prescription for an official preparation because they could not buy the preparation from a wholesaler, and it required some persuasion to get the eighth to make the preparation. But, even worse, several of the pharmacists offered my patient some ready-made troche more or less closely resembling the official, or offered compressed tablets of ammonium chlorid.

That this is not an isolated example of what often poses as pharmacy is shown by the fact that I have found it extremely difficult to find a pharmacist who would extemporaneously coat pills with gelatin. Most want the physician to alter his prescription so that one of the ready-made gelatin coated pills can be dispensed, if a gelatin coating is necessary. Some gelatin, hot water, a large cork and a few domestic sewing needles are all that is required for very satisfactory coating of pills with gelatin, yet few pharmacists seem willing to perform this simple procedure.

Two other illustrations, not so recent, have come to me from a colleague. A few years ago he was unable to obtain from either of two pharmacists an emulsion of cod liver oil without the hypophosphites because, as both said, "It does not come without hypophosphites." On another occasion four of the best drug stores in Boston were asked for the Compound Laxative Pill, U. S. P., then official in the pharmacopeia. In every case he was told that he must have meant the compound cathartic pill, which in no way resembles the pill he sought.

With this attitude on the part of the men supposed to be serving the public and the medical profession by the practice of pharmacy, is it any wonder that it is difficult to induce the medical profession to prescribe official preparations or combinations of official drugs in place of ready-made commercial substitutes largely drawn from among the proprietaries or specialties? Real pharmacy by real pharmacists is a necessity if we are to succeed in combating the proprietary evil.

CARY EGGLESTON, M.D., New York.

"CREDULITY AND CURES"

To the Editor:—Although I am aware that Dr. Peterson is fully able to defend himself against criticism made of him in his position on psychanalysis by Dr. Kempf in THE JOURNAL (Aug. 7, 1920, p. 427), I cannot refrain from asking you to permit me to take some part in the general discussion.

Dr. Kempf writes: "Through the psychanalytic method of studying the insane we have learned that the most potent cause of insanity is *repressed affective cravings*, and this repressive tendency is started early in childhood, not naturally or through the designs of Nature, but through the pernicious influence of prudish, purblind fathers and mothers, and dogmatic teachers who are obsessed with sexual phobias."

'We have learned' means psychanalysists have learned—for no one else has learned this.

I recall that Gil Blas associated himself with Dr. Sangrado as an apprentice, and under that master he engaged in the practice of bloodletting. The doctor had found this an infallible remedy. When to Gil Blas it seemed to fail in the face of the death of the patient Dr. Sangrado pointed out that the bloodletting had been insufficient and that the death of the patient only showed the method was not sufficiently practiced. And of course when recovery occurred it was recorded as a triumph of this method of treatment. Christian scientists adopt the same method of reasoning. By their method there can be no failure whatsoever when all conditions are favorable and when their plans are completely carried out.

Only in orthodox medicine are failures recorded even when conditions and technic are perfect. One could as little argue with a psychanalyst as with Dr. Sangrado or Mrs. Eddy. There simply is no argument with those who hold this position.

I have read the writings of Dr. Freud and Dr. Kempf and those of many others who adopt the Freudian methods. Being a practicing neurologist it was my duty to do so, and now I do not attempt these methods because they do not appear reasonable. I should not attempt methods which do not appear to me as reasonable and sound and which moreover, appear to me as unlikely or even dangerous. I know of no good results from the Freudian method, but I do know of harm resulting from it.

THEODORE DILLER, M.D., Pittsburgh

NEED OF A PEDIATRICIAN ON THE NATIONAL BOARD OF MEDICAL EXAMINERS

To the Editor —I was very much interested in the last report of the National Board of Medical Examiners It is fair to assume that the primary purpose of their examinations is to determine the fitness of the candidates to practice medicine Therefore it is of more than passing interest that of the eighty questions submitted in their last papers not a single one was immediately concerned with pediatrics

Three may be said to be remotely connected the child of 8 with the spots on the tonsils, the differentiation between varicella and smallpox, and the directions to prevent the familial spread of whooping cough

Is a knowledge of pediatrics necessary to the young practitioner? This cannot be doubted, for, while figures vary a conservative estimate is that one quarter of the patients seen in the first years are infants and children It is doubtful whether there is any branch of medicine about which the general practitioner is more at sea No papers are read with more avidity than those which throw light on the diseases peculiar to infancy and childhood There are more reasons than one for this state of affairs, but the chief reason is the failure of the medical schools to meet the situation

Pediatrics needs no brief Feeding infants properly, training children in personal hygiene cutting down the incidence of tuberculosis and heart disease at the time when they undoubtedly occur most frequently, linking up community work with child welfare, studying the psychology of childhood, especially the abnormal types seen in outpatient departments, hospitals and children's courts and seeking to solve the tremendous problem of the contagious diseases are a few concrete examples of the problems which are presented to the pediatric department of the medical school

Preventive pediatrics is recognized as second to no other branch of preventive medicine This being so, it seems to me that there is a crying need for the appointment of a pediatrician to the National Board of Medical Examiners This will lead to two desirable ends Candidates will know more about the diseases of infancy and childhood, and medical schools will be forced to give courses in keeping with the importance of the subject

LOUIS C SCHROEDER, M D, New York

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer s name and address but these will be omitted on request

QUININ AND UREA HYDROCHLORID

To the Editor —Could you tell me why quinin and urea hydrochlorid has not become more popular for local anesthesia? Is it less efficacious or more toxic than other preparations? If it is useful can you name some trustworthy firm or brand? Please omit my name in answering

L F C M D, Mexico

ANSWER —Quinin and urea hydrochlorid has the actions of quinin When injected hypodermically it exerts an anesthetic action much more prolonged than that of cocain' (Useful Drugs, Ed 4, 1920, p 127) It has been pointed out editorially in THE JOURNAL (Feb 14 1920 p 462) that quinin has been regarded for more than half a century by toxicologists as a protoplasmic poison capable of destroying various forms of animal and vegetable cells, and hence it need not be surprising that tissue necrosis may be produced by strong solutions of the quinin salts That this deleterious reaction actually does occur and has mitigated against the general use of quinin and urea hydrochlorid is confirmed by the report of the Committee on the Advantages and Disadvantages of Local Anesthesia in Nose and Throat Work (THE JOURNAL, July 31, 1920 p 315) To quote

> The only local anesthetic that produces edema and sloughing is quinin and urea hydrochlorid So many statements were found in the literature that this anesthetic had been abandoned in other fields of medicine because of edema and sloughing that writers who had presented favorable reports in nose and throat operations were communicated with by your committee One writer who had recorded 390 cases of tonsil lectomies extolling this anesthetic which he had used for four years and is still so recorded now states that he has not used it in two years although no publication has been made retracting his former endorsement Still another writer who stated that quinin urea came nearest the ideal local anesthetic now states that he has ceased using it Your committee finds that as far as nose and throat operations are concerned this drug has practically gone into innocuous desuetude

The anesthesia produced by this drug at the time of operation is good and the recovery of the patient might often be enhanced by its use if it did not have the serious drawback The product is official in the U S Pharmacopeia and may be obtained from any reputable pharmaceutical house

SPANISH MEDICAL REVIEWS

To the Editor —Will you kindly send me the address of Spanish journals similar to the Spanish Edition of THE JOURNAL

M MANAS Havana Cuba

ANSWER —We know of no journal in Spanish corresponding to the Spanish edition of THE JOURNAL

Among the better known medical journals in the Spanish language may be mentioned

Anales de la Facultad de Medicina Montevideo Bimonthly $2
Anales de la Facultad de Medicina Lima Peru Bimonthly 6 soles
Gaceta Médica de Caracas Caracas Venezuela Semimonthly 16 bolivares
Gaceta Médica de México Mexico City Irregular $6
Prensa Médica Argentina Buenos Aires Trimonthly 35 pesos
Revista de la Asociacion Médica Argentina Buenos Aires Monthly
Revista de la Universidad de Buenos Aires Buenos Aires Monthly $5
Revista Espanola de Medicina y Cirugia Barcelona Monthly 24 pesetas
Revista Médica del Uruguay Montevideo Thirty francs
Semana Medica Buenos Aires Weekly $5
Siglo Médico Madrid Weekly 20 pesetas
Medicina Ibera Madrid Weekly 25 pesetas
Progresos de la Clinica, Madrid Monthly 45 pesetas
Plus Ultra Madrid Monthly 60 pesetas

We presume the inquirer is familiar with Cuban medical journals, and therefore none is mentioned from that country

NAPOLEON S REPLY TO MADAME DE STAEL

To the Editor —Will you kindly satisfy my curiosity on the following point? Dr Havne in his article on The Rights of the Child (THE JOURNAL July 17 1920) quotes Napoleon s reply to Madame de Stael She who has borne the most sons for France Is that historical or but a paraphrase of Madame Stael Holstein s reply to Napoleon when in a fit of ill humor he bluntly asked her What have you given to France?' and she quickly replied Three children your Majesty Ou n est pas la femme?

JOHN A WIEMER M D Powers Ore

ANSWER —The statement of Napoleon to Madame de Stael is to be found in Gourgaud (le baron Gaspard), Sainte Helene Journal inedit de 1815 a 1818 Paris Flammarion, 1919 The passage reads

> Jan 18 1816 Napoleon related At a fete at Talleyrand s Mme de Stael seated herself next to Napoleon conversed for two hours and finally asked him abruptly Who is the greatest woman of the past or the present? Napoleon replied She who has or has had the most children '

This is perhaps confused with the statement of Napoleon uttered at St Helena Woman was given to man that she should bear him children (La femme est donnee a l homme pour qu elle fasse des enfants)

AMOUNT OF WINE THAT MAY BE PRESCRIBED

To the Editor —Please advise me how much wine a physician can prescribe to any one patient at any one time F D New York

ANSWER —Internal Revenue Regulation 60 defines liquor as including alcohol brandy whisky rum gin beer ale porter and wine and in addition thereto any spirituous vinous malt and fermented liquor liquids and compounds containing ½ of 1 per cent or more of alcohol by volume Article 12 Section 69 Paragraph B of the regulations provides that prescriptions for any alcoholic medicinal preparations may not be issued for more than one pint of spirituous liquor at a time and that not more than one pint shall be prescribed for the same person within any period of ten days

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA Juneau, Sept 7 Sec Dr Harry C De Vighne Juneau
HAWAII Honolulu Sept 6 10 Sec Dr R W Benz 1141 Alakea St Honolulu
ILLINOIS Chicago Sept 20 23 Director Francis W Shepardson State House Springfield
IOWA Des Moines Sept 15 17 Sec Dr Guilford H Sumner Capitol Bldg Des Moines
MASSACHUSETTS Boston Sept 14 16 Sec Dr Walter P Bowers State House Boston
NEW HAMPSHIRE Concord, Sept 9 10 Sec Dr Charles Duncan Concord

National Board Recognized in Scotland

In the spring of the present year, several representatives of licensing boards of England and France came to this country as guests of the National Board of Medical Examiners attended one of the examinations and, in a tour through various large cities, visited a number of the medical schools Dr Walter L Bierring, a member of the National Board who accompanied them on the tour, has recently received a letter from one of these guests, Dr Norman Walker a member of the General Medical Council of Medical Education and Registration of Great Britain and a representative of the Triple Qualification Board of Scotland, stating that the latter body had adopted a recommendation that American physicians who hold the certificate of the National Board of Medical Examiners be admitted to the final examination of the Triple Qualification Board

Clinical Teaching "Elements"

The London *Lancet* states that the reorganization of teaching in St Bartholomew Hospital provides for a medical "element' or division, and a surgical element, each of which will take its share in the ordinary duties of the hospital the entire staff of each to work as a single "firm" Each is provided with special facilities for observation and research, and has laboratories for pathologic investigation and routine work These two teaching elements are closely associated with the medical and surgical work of the hospital There is free daily communication between them Certain appointments in connection with the reconstruction of the pathologic department have been announced, including a bacteriologist and lecturer on bacteriology, a lecturer on morbid anatomy and histology and a chemical pathologist and lecturer on chemical pathology Three senior demonstrators are whole-time pathologists and in addition, there are three demonstrators who are part-time pathologists and eligible for posts as chief assistants in one or other of the clinical elements It is proposed that all chief assistants in future shall have previously served in the pathologic department, since one of their functions within the elements will be to superintend the pathologic work of the students These changes in the medical school will make pathology more essentially a part of the clinical teaching

Florida June Examination

Dr William M Rowlett secretary of the Florida State Board of Medical Examiners reports the written examination held at Jacksonville June 14-15 1920 The examination covered 7 subjects and included 70 questions An average of 75 per cent was required to pass Of the 49 candidates examined 36 passed and 13 failed The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Atlanta Medical College	(1915)	84 3
Emory University	(1920) 91 7	85 5
University of Georgia	(1920) 86 4	90 2
Southern Medical College	(1897)	81 5
Indiana Med College of Purdue Univ ity	(1906)	82
Indiana University School of Medicine	(1917)	87 5
University of Indianapolis	(1904)	78 8
University of Louisville	(1920)	89 7
Tulane University	(1920) 86 4 86 7	91 6
College of Physicians and Surgeons Baltimore	(1893)	78 9
Boston University School of Medicine	(1916)	91 4
College of Physicians and Surgeons Boston	(1911)	88 7
Missouri Medical College St Louis	(1887)	82 6
St Louis Univ School of Medicine (1904) 82 3	(1908)	86 4
Fordham University School of Medicine	(1913)	86 2
University and Bellevue Hospital Medical College	(1911)	90 1
University of the City of New York	(1880)	95 7
Jefferson Medical College (1912) 82	(1915)	88 3
Meharry Medical College (1916) 80	(1919) 78	80
Memphis Hospital Medical College	(1895)	79 8
University of Nashville	(1906)	82 2
University of the South	(1907)	80 7
University of West Tennessee	(1911)	75
Vanderbilt University	(1920)	84
University of Texas	(1915)	84 7
Medical College of Virginia (1914) 80 5	(1918)	86 8
University of Edinburgh Scotland	(1902)	91 4
FAILED		
University of Arkansas	(1907)	70
Southern College of Medicine and Surgery	(1913)	68 1
Illinois Medical College Chicago	(1910)	70 7
College of Physicians and Surgeons Chicago	(1907)	70 7
University of Louisville	1904)	67 1
College of Physicians and Surgeons Boston	(1912)	71 6
Beaumont Hospital Medical College	(1889)	61 6
Homeopathic Medical College of Missouri	(1902)	45
Albany Medical College	(1882)	70 9
Long Island College Hospital	(1899)	69 3
Chattanooga Medical College	(1909)	48 5
Memphis Hospital Medical College	(1913)	68 9
University of Nashville	(1909)	72 1

Nebraska June Reciprocity Report

Mr H H Antles secretary, Department of Public Welfare of the Nebraska State Department of Health reports 25 candidates licensed by reciprocity at a meeting held at Lincoln June 9-11 1920 The following colleges were represented

College	Year Grad	Reciprocity with
Georgia Coll of Eclectic Medicine and Surgery	(1914)	Arkansas
American Medical Missionary College	(1910)	Mass
Chicago College of Medicine and Surgery	(1917)	Illinois
Jenner Medical College	(1914)	Illinois
Loyola University (1916)	(1918 2)	Illinois
Northwestern University Medical School	(1919)	Illinois
Rush Medical College (1915)	(1919)	Illinois
Indiana University School of Medicine	(1919)	Indiana
State University of Iowa College of Medicine	(1916)	Iowa
College of Physicians and Surgeons Kansas City	(1898)	Kansas
Kansas Medical College Topeka	(1900)	Kansas
Johns Hopkins University	(1916)	Maryland
University of Minnesota Medical School	(1907)	Minnesota
Barnes Medical College	(1910)	Mis ouri
St Louis University School of Medicine	(1912)	Iowa
Columbia University (1909)	(1916)	New York
Jefferson Medical College	(1915)	Missouri
University of Pennsylvania School of Medicine	(1898)	Penna
Meharry Medical College	(1918)	Arkansas
University of Tennessee College of Medicine	(1896)	Oklahoma
University College of Medicine Richmond	(1907)	Minnesota

Maine July Examination

Dr Frank W Searle secretary of the Maine Board of Registration in Medicine reports the written examination held at Portland July 6 7 1920 The examination covered 10 subjects and included 95 questions An average of 75 per cent was required to pass Seventeen candidates were examined all of whom passed Three candidates were licensed by reciprocity The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Bowdoin Medical School (1920) 80 81 82 82 83 84 84		
Johns Hopkins University	(1919)	84
Harvard University (1895) 82 (1906) 78 (1914) 82 (1920) 81 82 83		
Boston University	(1920)	82
Tuft College Medical School	(1920)	77
McGill University Montreal	(1920)	83

College	Year Grad	Reciprocity with
LICENSED BY RECIPROCITY		
University of Vermant	(1918 1919)	Vermont
Royal College of Surgeons Edinburgh	(1893)	New Hamp

Arkansas Eclectic May Examination

Dr Claude E Laws secretary, Arkansas Eclectic Board of Medical Examiners reports the written and oral examination held at Little Rock May 11-12 1920 The examination covered 12 subjects and included 120 questions An average of 75 per cent was required to pass The 41 candidates examined were all graduates of the 1920 class of the Kansas City College of Medicine and Surgery, and of the 41 20 passed and 21 failed

Book Notices

DIE SCHWEBELARYNGOSKOPIE UND IHRE PRAKTISCHE VERWERTUNG Von Geh Med Rat Prof Gustav Killian Direktor der Laryngo Rhinologischen Klinik der Universitat Berlin Price 60 marks Pp 78 with 48 illustrations Berlin Urban & Schwarzenberg, 1920

Killian gives the history of his discovery of suspension laryngoscopy, describes the instruments he now uses, and and presents his technic in detail for examination of the hypopharynx and the trachea, and for introduction of the bronchoscope In the first chapter he narrates how he rigged up a temporary apparatus for exposure of the larynx in a cadaver so that an artist might make drawings This was so successful that he then devised instruments for exposing the larynx in the living The original instruments have been much modified He now uses the trough shaped spatula for holding up the tongue The mouth gag and tooth hooks are much after the models of Lynch The original form of the gallows is retained His table has a separate support for the head by which it may be raised or lowered independently of the table The table itself may be raised by means of a long screw so that the surgeon may work standing, if necessary Killian uses a Kirstein lamp for illumination and so is able to use the mirror of the lamp for a demonstration mirror, enabling students to see in the mirror what the surgeon sees in the larynx In chapter V he describes in detail his technic of introducing the instrument, and exposing the uvula, the edge of the epiglottis, the arytenoids, the lumen of the larynx, and lastly the anterior commissure The work of Lynch is mentioned, but no description is given of Lynch's method of exposure of the larynx without having the head hanging over the end of the table Figures 37, 38 and 39 are wrongly numbered *They should be 38, 39 and 37, respectively* Chapter IX is given to the use of suspension laryngoscopy in children, a procedure of much value, especially in introducing the bronchoscope There is a considerable list of references to the literature, but naturally few to American literature since the outbreak of the war The work is illustrated by forty-four cuts in the text and four colored plates showing various normal and abnormal conditions The colored plates are a little too blue and appear to represent patients rather more cyanotic than they are seen in America This may be only a result of the war as affecting color printing

LE SYMPATHIQUE ET LES SYSTÈMES ASSOCIÉS ANATOMIE CLINIQUE SEMIOLOGIE ET PATHOLOGIE GÉNÉRALE DU SYSTÈME NEURO GLANDULAIRE DE LA VIE ORGANIQUE Par A G Guillaume Paper Price 6 francs 50 net Pp 160 with illustrations Paris Masson et Cie 1920

In this book, emphasis is laid on the fact that the chromaffin organs are from the standpoint of their development and function closely associated with the sympathetic nervous system, and the cranial, thoracicolumbar and sacral portions of the autonomic system, together with these chromaffin organs, form a closely integrated complex, "le grand systeme neuro glandulaire de la vie organique" Chapter I contains a brief review of the general morphology and physiology of this system, including the histogenesis, anatomic distribution and functional relationships of its constituent elements Chapter II presents some details concerning the conduction paths in the autonomic system The part that deals with the visceral efferent paths associated with the cranial nerves is thoroughly up to date and is accompanied by good diagrams Chapter III deals with the pharmacologic aspects of the subject and Chapters IV and V with symptomatology Chapter VI contains a discussion of the interrelations between the visceral and somatic subdivisions of the nervous system, and especially with referred pain in visceral disease and with reflex trophic disturbances The volume contains little that is new, and some statements that are presented as representing established facts are certainly open to question It makes no pretense of being a thoroughgoing review of recent literature The appended bibliography contains no references to articles representing original investigation, but includes a list of standard reference books and monographs on embryology, physiology endocrinology, pharmacology and neurology which contain sections dealing with the subjects discussed in the book

Medicolegal

Evidence of Malpractice—Use of Fracture Basket

(Wojciechoiski v Corsell (Mo) 217 S W R 638)

The St Louis Court of Appeals, in affirming a judgment in the plaintiff's favor for $3,000 damages for alleged malpractice, says that a sheet of steel fell on his right leg, causing a compound comminuted fracture of the bones and inflicting lacerations or wounds He adduced evidence tending to show that it was negligence to place his leg in a wire basket, or fracture basket, after the setting of the bones, and to allow it to remain there for weeks, instead of putting it in a splint or cast of some character designed to hold the bones rigidly in position unless it could be said, as a matter of law, that the course pursued by the defendant was justifiable because of the condition of the leg or at any rate that because of such condition the defendant's failure to pursue a different course was the result of an error of judgment on his part of such character as would not entail liability under the law As to the condition of the leg at that time the evidence in the plaintiff's behalf tended with much force to show that no infection, or at least none of any considerable extent, or of a serious or dangerous character was present This directly appeared from the testimony of the plaintiff as to the condition of his leg, and inferentially from his testimony corroborated by that of another witness, to the effect that after the setting of the leg the bandage which the defendant placed about the leg and wire basket, which, it was said completely covered the leg no openings being left and no drain pipes inserted was not removed for three weeks or more the leg receiving no treatment during that time From the testimony of the plaintiff and said witness coupled with the expert testimony adduced by the plaintiff, a jury could, with entire propriety find that there was no infection or other condition present such as to make it in any wise unsafe to use some one of the devices shown by the evidence to have been in common use, designed to keep the bones of the leg in proper alinement while they were uniting, and the testimony of the plaintiff's expert tended to show that some of these devices, designed so as to afford opportunity for treating the leg might be used in these cases though much infection might be present The court is of the opinion that the evidence was such as to make the question of the defendant's negligence one for the jury Nor, under the circumstances, does the court think that there was any merit in the contention that under any view of the evidence the defendant was guilty at the most of a mere error of judgment as to the proper treatment to be given the plaintiff's injured leg and could not be held liable for a failure to give a different treatment The court is of the opinion that the evidence, when viewed in the light most favorable to the plaintiff tended to show neglect on the part of the defendant, and that, so viewing the evidence, if there was an error of judgment, it was prima facie of such character as to be inconsistent with the use of that degree of skill which it is the duty of every surgeon under like circumstances, to bring to the treatment of such a case

It was urged that error was committed in admitting testimony tending to show that the defendant failed to use an anesthetic, failed to take more than one roentgenogram did not lance the wound or insert drainage tubes, did not elevate the leg or apply ice bags did not call a consulting physician, and did not inform the plaintiff or his family of the seriousness of his condition as testified to by the defendant The point made was that the petition charged particular acts of negligence, and therefore evidence as to other specific acts was not admissible But the court thinks that no reversible error intervened on this score The testimony complained of was admissible as going to show the character of the treatment, alleged by the plaintiff to have been negligent and unskilful or as tending to show the condition of the leg this having an important bearing on the question as to the alleged negligent and unskilful treatment thereof

Nor was it error to permit the jury to find that the defendant not only failed to use a splint but failed to apply any other method or device to cause said fractured bones to unite

in normal and usual alinement" Under the evidence adduced the jury could properly find that in using the wire fracture basket the defendant did not use a method or device such as to cause the fractured bones to unite in normal and usual alinement

Invalid Provision in Law for Revoking Licenses

(State Board of Medical Examiners et al Lewis (Ga) 107 S E R 24)

The Supreme Court of Georgia holds that Section 14 of the act approved Aug 18, 1913, entitled "An act to abolish the present state board of medical examiners and to establish a composite board of medical examiners for the state of Georgia, to define its duties and powers," etc, is unconstitutional and void so far as it provides for the trial and conviction of a licensed physician of certain specified offenses, and the consequent revocation of his license, as the section, so far as it provides for such trial and the penalty on conviction, is violative of the due process clause of the federal and state constitutions, as no provision is made in the section, or elsewhere in the act, for due notice and hearing of the accused Furthermore, the court holds that where a licensed physician was tried and convicted under said Section 14, and appealed to a jury in the superior court, where he was again convicted, and then sued out a writ of error to the Court of Appeals of Georgia, where the conviction was sustained, he could subsequently attack the judgments of conviction in the superior court and before the board of medical examiners, and, on proper petition to a court of equity, prevent the enforcement of the penalties imposed by the act on conviction

The supreme court says that though in this particular case the accused might have appeared and submitted evidence, that did not cure the defect in the act itself If such a hearing was granted him, it was by grace, and not by virtue of the requirements of the law Nor did the right of appeal to a jury in the superior court cure the defect in the law The statute under which the accused was tried by the state board of medical examiners being invalid and void on the constitutional grounds pointed out the proceedings before the board, which resulted in finding the defendant guilty of certain specified offenses, were nugatory, and the finding was without effect and void, and the appeal and trial before a jury under the provisions of Section 14 could not have the effect of giving validity to the proceedings and findings before the board, nor could the finding of the jury in the superior court on the appeal be treated otherwise than as void as the statute under which the trial was had was itself invalid Nor could the fact that the case was carried to the court of appeals, where the judgment of the court below was affirmed, give validity to the proceedings, or bar the accused from asserting that all proceedings had against him were nugatory

It was urged that even if the principles stated were sound in criminal cases, the doctrine could not be applied to civil cases, and it was insisted that the proceedings against the accused, which resulted in his conviction and the revocation of his license were civil proceedings But the supreme court cannot assent to this proposition in its entirety The result, it was true, did not subject the accused to imprisonment in the chain gang or the penitentiary, and resulted merely in the revocation of his physician's license and the striking of his name from the record kept in the office of the clerk of the superior court But this itself was a penalty, and the proceedings were in the nature of criminal proceedings The proceedings were certainly quasi-criminal in character The language of the section which authorizes the proceedings making it the duty of the board to 'prefer charges against the physician, and providing for the revocation of his license 'in the event of his conviction' by the jury distinctly imports a trial in a criminal case

It follows that the accused was entitled to injunctive relief against the threatened action of the state board of medical examiners, which, if carried out should result in revoking and canceling his license and thereby depriving him of the right to pursue his profession, and it requires no argument to demonstrate that the injury which would thus be inflicted would be irreparable in its character The court below did no err in granting such injunctive relief

Society Proceedings

COMING MEETINGS

Amer Assn of Electro Therapy & Radiology Atlantic City Sept 14 17
Amer Assn of Obstetricians and Gynecologists Atlantic City Sept 20 22
American Association of Railway Surgeons, Chicago Oct 6 8
American Public Health Association San Francisco Sept 13 17
American Roentgen Ray Society Minneapolis Sept 14 17
Colorado State Medical Society Glenwood Springs Sept 7 9
Indiana State Medical Association South Bend Sept 23 25
Kentucky State Medical Association Lexington Sept 27 30
Medical Association of the Southwest Wichita Kan Sept 27 29
Minnesota State Medical Association St Paul Sept 29 30
Missouri Valley Medical Society of the Omaha Neb Sept 6 7
Pennsylvania Medical Society of the State of Pittsburgh Oct 4 7
Utah State Medical Association Ogden Sept 7 8
Vermont State Medical Society Rutland Oct 7 8
Washington State Medical Association Tacoma Sept 16 17
Wisconsin State Medical Society of La Crosse Sept 8 10

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal Medical Sciences, Philadelphia

July 1920 **160** No 1

*Carcinoma of Pancreas K Speed Chicago —p 1
Therapeutic Use of Oxygen R D Rudolf Toronto —p 10
Case of Splenomegaly with Polymorphonuclear Neutrophil Hyperleukocystosis E L Tuohy Duluth Minn —p 18
*Comparative Study of Trypanocidal Activity of Arsphenamin and Neoarsphenamin J F Schamberg J A Kolmer and G W Raiziss Philadelphia —p 25
*Contraction Waves in Normal and Hydronephrotic Ureter An Experimental Study W G Penfield Oxford Eng —p 36
Diets for Ambulant Treatment of Diabetes Mellitus H O Mosenthal and H J Wiener New York —p 46
Acute Infectious Enteritis with a Polyneuritic Syndrome F J Farnell and A H Harrington Howard R I —p 52
Functional Blood Pressure R F Ives New York —p 61
*Study of Blood After Splenectomy Special Reference to Leukocytes M W Hall M C U S Army —p 72
Modern Individualized Dietary Treatment in Diabetes M Lauritzen Copenhagen —p 79
Roentgen Ray studies of Bronchial Function J G M Bullowa and C Gottlieb New York —p 98
Heteroplastic Bone Formation in Fallopian Tube G Asami Honolulu —p 107
Mercury Bichlorid Intravenously C H Bastron Lincoln Neb —p 118

Carcinoma of Pancreas—Fifty-two cases of primary pancreatic cancer were analyzed by Speed Over half of these were clinical diagnoses made by the attending staff of Cook County Hospital In the fifty-two cases the average age at the time of diagnosis of primary cancer was 57 years, the youngest 36 the oldest 76 The most constant symptom was cachexia This was present in 90 per cent of the patients at the time of admission and involved a weight loss of from a few pounds to 80 pounds The next common symptom was jaundice It was present in 80 per cent of the cases Pain was the third prominent symptom usually of cardialgic or gastralgic character present in 61 per cent of the cases Personal knowledge on the patient's part of an abdominal tumor mass or its discovery on examination was the next common finding in order, 55 per cent of the patients had a mass either in the liver or some part of the midepigastric region Ascites was present in approximately 20 per cent as was also hemorrhage which occurred in eleven patients, two of the mouth, four of the nose one of the bowel, two in the buttocks and skin and two of the stomach Constipation was mentioned by nineteen patients, diarrhea occurred in but three Edema of the lower extremities occurred in 6 per cent A necropsy was made in eleven cases The head of the pancreas was most often involved in cancer, the body next and the tail least often Not one showed pancreatic calculus Metastases occur usually first in the lymphatic glands around the pancreas and galltract areas The liver, of all neighboring organs is most often invaded

Trypanocidal Activity of Arsphenamin and Neo-Arsphenamin—From the results obtained by Schamberg and his co-workers it is evident that neo-arsphenamin is a safer drug than arsphenamin, even when doses of 1 gm of neo-arsphenamin, which approximates 0.6 gm of arsphenamin in therapeutic activity, are given in the treatment of syphilis there remains a larger margin of safety. The trypanocidal activity of arsphenamin is 1.74 times greater than that of neo-arsphenamin. Accordingly, 0.6 gm arsphenamin equals 1.05 rather than 0.9 gm of neo-arsphenamin in therapeutic activity. The trypanocidal dose (dosis therapeutica) of arsphenamin is 4.56 times less the highest tolerated dose for the rat (dosis tolerata), the trypanocidal dose of neo arsphenamin is 6.35 times less the highest tolerated dose. These results indicate that neo-arsphenamin is a somewhat safer compound than arsphenamin, and that when 1 gm of neo-arsphenamin is administered as the equivalent in therapeutic activity to 0.6 gm of arsphenamin, the margin of safety is even then greater.

Cause of Contraction Waves in Ureter Calculus—It is suggested by Penfield that in the passage of a ureteral stone, trauma and inflammation increase the rate of metabolism in the ureter wall about the stone, a constriction ring results, followed by distention of the ureter and retroperistalsis. This would cause great distention of the renal pelvis and give to renal colic its peculiar rhythmical character.

Leukocyte Count Following Splenectomy—Following the usual drill a cavalryman was seized with faintness, nausea and sudden sharp pain in the left upper quadrant of the abdomen. He was brought to the hospital in a condition of collapse. A definite diagnosis was impossible, but six hours after the onset of symptoms a laparotomy was done with the tentative diagnosis of a ruptured viscus. Hemorrhage in the peritoneum was traced to a small tear in the spleen and the organ was removed. The removal of the spleen resulted in a considerable increase in the total leukocyte count which persisted with much irregularity for over three months. In the early period all types of leukocytes were increased in nearly the same proportion, although a slight increase of endothelial cells was noted at the expense of the lymphocytes. In the intermediate period, both total and differential count showed such marked variation as to render averages valueless but the total count usually was high. In the final period, a comparative equilibrium was reached, with a moderate increase in the total count, due entirely to lymphocytes and endothelial cells while the granular leukocytes showed strictly normal figures. The endothelial cells were constantly increased both relatively and absolutely. The observations on the Arneth index suggest that the increase in the count is at least in part due to the removal of some factor restricting the production of white cells. No eosinophilia appeared during the course of the work.

American Journal of Public Health, Boston

July 1920 **10**, No 7

Compensation of Health Officers. J. A. Ferrell, New York.—p. 569.
Influenzal Pneumonia as Influenced by Dish Washing in 370 Public Institutions. J. G. Cumming, Washington, D. C.—p. 576.
Bacteria of Air in Amusement Hall. F. Huddleson and T. G. Hull.—p. 583.
Coordination of Public and Private Agencies in a State Program of Public Health Nursing. J. L. Mariner, Montgomery, Ala.—p. 588.
Sociologic Aspect of Uncinariasis. Oscar Dowling, New Orleans.—p. 595.
Epidemic of Pneumonic Plague. W. H. Kellogg, Sacramento, Cal.—p. 599.

American Review of Tuberculosis, Baltimore

July 1920 **4**, No 5

Present Status and Future Prospects of Tuberculosis Campaign. V. C. Vaughan, Ann Arbor, Mich.—p. 311.
Serologic Studies on Tuberculosis. Y. Nishida and S. A. Petroff, Trudeau, N. Y.—p. 322.
Relation of Sound and Light to Interpretation of Roentgen Ray Examinations of Chest. J. J. Singer, St. Louis.—p. 340.
Work of Commission for Prevention of Tuberculosis in France in Department of Eure et Loire. B. L. Wyatt, New York.—p. 347.
Tuberculosis Situation in Germany. E. H. Bruns, Trier, Germany.—p. 370.
Elimination of Tuberculosis from Army. R. C. Matson, Portland, Ore.—p. 398.

Serologic Studies on Tuberculosis—Sensitized animal serum having a high titer of antibodies was studied by Nishida and Petroff. It was obtained by inoculation of sheep intravenously with human tubercle bacilli. The titer was 0.0001 c.c. Dead tubercle bacilli or products of tubercle bacilli do not produce as high a titer of antibodies as the living organisms. Complement-fixing antibodies resist heat better than the antibodies for the Wassermann reaction. A temperature of 60° C. will not destroy the tuberculous complement-fixing antibodies obtained in experimental animals. Roentgeon-ray radiation when a full erythema-producing dose is given does not destroy the antibody, antigen or complement. Ultraviolet rays destroy the antibodies and complement but have slight effect on the antigen. Sunlight at 1,600 feet elevation has a slight effect on antibodies, more on complement and least on antigen. Complement-fixing antibodies are colloids. They are not lipins chemically, but are either globulins or are absorbed by the globulin. The precipitins and complement fixation have been studied parallel with each other. The two antibodies responsible for the two different reactions are probably the same but represent two distinct phases of one and the same phenomenon.

Tuberculosis in Germany—An investigation of the tuberculosis situation in Germany particularly in the area occupied by the American Army was undertaken and the findings are reported by Bruns. The German methods of combating tuberculosis are about the same as those employed by the best state health organizations of our own country. In the area occupied by the American Army tuberculosis is slightly more prevalent and the death rate relatively higher than that of Prussia. Tuberculosis in all its forms and for all ages has markedly increased during the war. Of all the etiologic factors entering into this increase the shortage of food is most important. Undernourishment, overwork, the stress and strain of a long war and unfavorable environment prepare a fertile soil for the tubercle bacillus to flourish in all its glory. Tuberculosis patients are dying because they cannot obtain the proper nourishment so essential to the treatment of their disease. Those infected are becoming clinically tuberculous. Unquestionably the children of the poorer classes in the cities and the sick are suffering as a result of the shortage of food and should be the first to receive relief. The increase in tuberculosis is relative to the shortage of food and improvement of the food supply is necessary for its reduction.

Annals of Surgery, Philadelphia

July 1920 **72**, No 1

Duties and Responsibilities of Civil Surgeon When Called to Active Military Service. G. E. Brewer, New York.—p. 1.
Empyema. A. P. C. Ashhurst, Philadelphia.—p. 12.
Operation for Empyema in Young Adults. F. L. Bunts, Cleveland.—p. 66.
Etiology of Chronic Empyema. W. Martin, New York.—p. 70.
Treatment of Chronic Empyema. G. J. Heuer, Baltimore.—p. 89.
Empyema. H. Lilienthal, New York.—p. 87.
*Fatal Postoperative Pulmonary Thrombosis. A. J. Ochsner, Chicago, C. C. Schneider, Milwaukee.—p. 91.
*Callous Ulcer of Posterior Wall of Stomach. W. J. Mayo, Rochester, Minn.—p. 109.
Failure of Primary Rotation of Intestine (Left Sided Colon) in Relation to Intestinal Obstruction. E. Rixford, San Francisco.—p. 114.
*Mesenteric Thrombosis: Report of Six Cases. G. G. Ross, Philadelphia.—p. 121.

Prevention of Postoperative Pulmonary Thrombosis—Ochsner and Schneider believe that in the future it will be justifiable systematically to add the transfusion of 600 c.c. of whole blood to the preliminary treatment in a considerable proportion of cases belonging to a class which has in the past made up the list of deaths from pulmonary thrombosis and that the other precautions will be carried out with greater care. It is likely that this will result in a considerable reduction in the death rate from postoperative pulmonary thromboses. An analysis regarding the etiology of the thrombophlebitis as shown in eight tabulated cases is given.

Ulcer of Stomach and Duodenum—From July 1, 1914 to July 1, 1919, 647 operations were performed in the Mayo Clinic on 638 patients with gastric ulcers with an average operative mortality of 4.7 per cent. All patients who died in

the hospital following operation are statistically classified as having died from operation, without regard to the cause of death or length of time after operation During this same five-year period 2,734 operations were performed on 2,720 patients with duodenal ulcers, with an operative mortality of 1 2 per cent In twenty-eight of the series of 638 gastric ulcers the ulcers were multiple Five hundred and thirty-four were located on or around the lesser curvature of the stomach, eight-five involved the posterior wall, nine were on or around the greater curvature, five were on the anterior wall, and five were not located exactly because of the emergency nature of the operation

Pain Symptom in Mesenteric Thrombosis—In the five cases which Ross reports pain was a prominent symptom as it is in every acute intestinal obstruction In Case 1 the patient was taken sick ten days before admission with a severe attack of abdominal pain in the region of the umbilicus, and then becoming general throughout the abdomen Similar (?) attacks had been noted for fourteen years prior to admission In Case 2 the attack began suddenly, with abdominal pain, nausea, and vomiting In Case 3 the chief complaint was pain over the whole abdomen It is described in detail in the history as beginning seven days before admission as an epigastric pain of gradual onset, becoming worse three days after the beginning of the pain In Case 4 the illness was described as beginning two days before admission with pain in the right lower abdomen, soon followed by vomiting In this case the pain remained localized in the right lower abdomen In Case 5 the patient was seized with a severe pain in the epigastrium It is evident then, that in all five cases a very definite history of pain is an early symptom, in only one of the instance described as of gradual onset

Archives of Neurology and Psychiatry, Chicago

July 1920 **4**, No 1

Neuroses of Peace J H Lloyd Philadelphia—p 1
*Electromyographic Studies of Muscles During Hysterical Contraction S Cobb Boston—p 8
*Doubling of Spinal Cord B Lipshutz Philadelphia—p 16
*Acute Descending Radicular Type of Epidemic Encephalitis I H Pardee New York—p 24
Four Cases of Encephalitis with Involuntary Movements R C Hamill Chicago—p 44
*Differential Diagnostic Difficulties in Pernicious Anemia with Associated Mental Disorder B L Jones and T Raphael New York—p 55
*Path of Faradic Sensibility G P Grabfield Ann Arbor Mich—p 63
*Simple Method for Recording Changes in Cutaneous Sensibility L Feimer, New York—p 81

Hysterical Muscle Contractions—Laboratory evidence is brought forward by Cobb that the involuntary muscular contractions in hysterical conditions are physiologically similar to normal conscious muscular contractions The short, repeated, hysterical contractions that clinically resemble tremors can be differentiated electromyographically from such a tremor as that of paralysis agitans, or from clonus, by their slower rate and greater irregularity

Double Spinal Cord—External examination showed no abnormalities in the case reported by Lipshutz On opening the dural sac, however, the spinal cord was found divided in its caudal portion into two distinct symmetrical halves, the two entirely enclosed in a single dural sheath Similarly, the arachnoid stretched across as a single membrane The bifurcation began at the caudal border of the eleventh thoracic vertebra and extended to the caudal limit of the cord, forming two independent symmetrical halves The caudal limit of each half was at the level of the cephalic border of the first sacral vertebra The conus medullaris of each half was independent and at the level of the third sacral vertebra, the halves united into a single large filum terminale, the latter coursing caudally for a distance of 5 cm to gain attachment to the dorsal surface of the first segment of the coccyx The cervical and thoracic portions of the cord were normal in appearance The peripheral nerves cephalic and caudal to the bifurcation presented no variations in the formation of the different plexuses and in their normal peripheral distribution The inner surface of the dura at the level of the caudal border of the twelfth thoracic vertebra likewise showed an interesting and rare anomaly Where the division of the cord was total, a distinct band of dura was found projecting between the two halves of the cord The band of dura was directed ventrodorsally and had a first attachment of 1 cm on both the ventral and dorsal surfaces of the dura It was of an hour-glass shape and was placed in the sagittal plane This band or fold was clearly a part of the dura, being of the same texture and consistency In the unopened dura it seemingly caused no pressure on the halves of the cord The division of the spinal cord began 0 5 cm cephalic to the dural band noted above

Acute Radicular Epidemic Encephalitis—Five cases are reported by Pardee, but as all the patients recovered, only a clinical study could be made The chief symptoms were (1) sharp lancinating root pains, (2) paresthesia, (3) muscular spasms, (4) hyperesthesia, (5) delirium, and (6) fever

Pernicious Anemia Mistaken for Arteriosclerosis—Jones and Raphael suggest that probably more cases of pernicious anemia are mistaken for arteriosclerosis than are generally recognized Therefore, they advise that patients with doubtful cases of arteriosclerosis, especially those with a history of remissions, should, as a routine procedure, have frequent blood counts made, and neurologic examinations for cord changes Careful history taking may reveal the so-called "prepernicious" symptoms in cases that otherwise might be mistaken for arteriosclerosis

Path of Faradic Sensibility—The evidence collected by Grabfield has been largely gathered from a study of cases presenting certain neurologic lesions or psychiatric conditions, and suggests that faradic stimuli of liminal value probably follow the path of the thermal fibers, while markedly supraliminal stimuli may use other paths The postrolandic cortex is in all likelihood the arrival platform for these impulses

Recording Cutaneous Sensibility—Feimer describes charts used by him and others to record changes in cutaneous sensibility and which can be interpreted easily

Bulletin of Medical and Chirurgical Faculty of Maryland, Baltimore

April 1920 **12**, No 7

Development of Medical Department U S Army M W Ireland Washington D C—p 108
Child and State H L K Shaw, Albany N Y—p 111

California State Journal of Medicine, San Francisco

July 1920 **18**, No 7

Neglected Opportunities H A L Ryfkogel San Francisco—p 242
Campaign Issues D A Smith Santa Barbara—p 245
*Formication Test in Peripheral Nerve Injuries—Its Interpretation C L Tranter San Francisco—p 248
Experiences in Testicle Transplantation L L Stanley San Quentin—p 251
Uretero Pyelography and Cystography G G Reinle and E S Depuy Oakland—p 254
Problem of Hospital Dietitian A F Morgan and A H Metcalf Berkeley—p 255

Formication Test of Nerve Injuries—Tranter maintains that the formication test gives definite evidence of regeneration long before muscle reflexes appear or before voluntary motion becomes possible It frequently tells when a suture has been unsuccessful, as may happen when the ends pull apart after having been sutured under some unavoidable tension It often indicates the position of a neuroma under a long scar and helps in locating the nerve ends at operation and in telling whether a suspicious palpable mass is a neuroma or not, or in revealing a second unsuspected lesion, and finally, it is of great value in helping to keep up the morale of the patient during the long period before the reappearance of voluntary motion

Canadian Medical Association Journal, Toronto

July 1920 **10** No 7

Focal Infection C K P Henry—p 593
Treatment of Club Foot W S Verall—p 605
Scoliosis A M Forbes—p 609
Work of Psychopathic Hospital A G Morphy—p 616

Advances in Knowledge about Blood Cells During Past Six Years O C Gruner —p 624
Medical Education J J R Macleod —p 638
Fibromyoma Radium Treatment E S Hicks —p 652
Incipient Diabetes Mellitus E H Mason and C G Sutherland —p 657
Heat and Infant Mortality A Jobin —p 661

Colorado Medicine, Denver

July 1920 **17**, No 7

Management of Ununited Fractures H G Wetherill and C Powell Denver —p 173
Medical Work of Federal Board for Vocational Education A Filmer Washington D C —p 177
Misleading Conditions in Acute Suppurative Otitis Media J J Pattee Pueblo —p 180
*Teaching Simplified Infant Feeding F P Gengenbach Denver —p 184
Relation of Hernia to Military Service W W Grant Denver —p 190

Simplified Infant Feeding—The salient features of the method recommended by Gengenbach are first, boiling the milk, second, a method for determining the amount of each feeding, and, third, a method of calculating the amount of each ingredient in the feeding Knowing that many infants cannot at the beginning digest cow's milk very well, it is suggested that the feedings at first should contain only 1 ounce of whole milk for every pound of body weight, and that this amount be later gradually increased to 1½ ounces An infant, 3 months old, weighing 10 pounds, requires 450 calories in daily feed On a three-hour feeding schedule it is to receive usually seven times 4 ounces, or 28 ounces Of this amount, 10 ounces are to be in the form of whole milk, and the other 18 ounces in plain or cereal water These 10 ounces of whole milk (from 20 to 21 calories to the ounce) represent about 200 of the 450 calories required The remainder are furnished by the carbohydrate added, either sugar alone, or sugar and starch, the latter in the form of a cereal dilution When tolerated cereal dilutions are preferable Barley water is ordinarily used for this purpose, using three level tablespoonfuls of barley flour or two rounding tablespoonfuls of pearl barley to a quart of water The 18 or 20 ounces to be used represent about 60 calories The remaining 190 calories are provided in the form of sugar, and as 1 ounce of table sugar, represents 120 calories, and 1½ ounces of sugar to the day's feeding

Endocrinology, Los Angeles

April June 1920 **4**, No 2

*Hypophyseal Disorders with Special Reference to Froelich's Syndrome (Dystrophia Adiposogenitalis) H G Beck Baltimore —p 185
*Relationship between Thyroid and Parathyroids S Vincent and J S Arnason Winnipeg Canada —p 199
Gynecomastia F S Hammett Philadelphia —p 205
*Fright as a Cause of Epilepsy and How It Acts E A Tracy Boston —p 221
Case of Complete Amenorrhea with Fulminating Symptoms Surgical Demonstration of Ovarian Etiology C Dederer Bay City Mich —p 229

Operations on Hypophysis—Beck says that except for the fact that operations on the hypophysis are fraught with considerable danger, the mortality rate being from 10 to 16 per cent, the indications for surgical treatment of disease of this gland would be practically comparable to those for diseases of the thyroid The complete removal of the gland or any process which totally destroys the substance will lead to the condition known as cachexia hypophysopriva, operations, therefore, are restricted largely to tumors and are resorted to more frequently in conditions associated with hyperfunction

Conversion of Parathyroids into Thyroid Tissue—The series of experiments reported on by Vincent and Arnason do not lend support to the view that parathyroids left behind after thyroidectomy become converted into thyroid tissue.

Fright as Cause of Epilepsy—It is maintained by Tracy that severe fright can produce idiopathic epilepsy in a child without a predisposition to the disease It acts by causing a hypertonia of the sympathetic nerves A hypertonia of sympathetic nerves was the evident beginning of the disease in a case reported

Relationship Between Amenorrhea and Ovary—A case is reported by Dederer in which a patient suffered from amenorrhea for about fourteen years following the surgical removal of parts of both breasts, for reasons not now known Sectioning of the sympathetic nerves to the ovaries and resection of the adventitia of the ovarian vessels was followed by the establishment of normal menstruation

Florida Medical Association Journal, St Augustine and Jacksonville

June 1920 **6** No 12

The New Era Wm E Ross Jacksonville —p 220

Indiana State Medical Association Journal, Fort Wayne

July 15 1920 **13** No 7

*Case of Temporary Incarceration of Transverse Colon Within Bilateral Hernial Sacs D J Royer Fort Wayne —p 227
*Epidemic Encephalitis in Northern Indiana R V Hoffman South Bend —p 228
The Physician the Training of an Intern F B Wynn Indianapolis —p 232
Acute Appendicitis R C Ottinger Indianapolis —p 235
Autogenous Bone Graft L T Rawles Fort Wayne —p 238

Transverse Colon Incarcerated in Hernia Sac—Royer's patient gave a history of stomach and bowel trouble dating back twelve or fifteen years He had no gastric or intestinal symptoms but complained of a feeling of distress in the left side of his abdomen in the left lumbar region He said there was something in there that would not let the food pass out of his stomach He had no constipation, yet he said the stool was very small At a variable time after eating this distress would come on and he would have to use an enema to obtain relief For some time past he had been using rectal dilators nearly every morning, and thought they were a great help His trouble was attributed to his work i e lifting and carrying heavy articles He also mentioned that he had a small lump in each groin one of which he had had for several years while the other had appeared within the past year Roentgen examination of the gastro-intestinal tract revealed a transverse colon apparently markedly dropped and manipulation was attempted to ascertain the degree of mobility Instead of displacing the intestine upward as anticipated, it was found to be firmly bound down behind the pubes On digital examination bilateral hernias were found At the end of a week another barium meal was given to study further the incarcerated colon and to determine accurately the degree of stasis present. At the twenty four hour period, instead of finding the expected condition the transverse colon was in a practically normal position with no evidence of the hernia The small bilateral hernial sacs were repaired The case emphasizes the advisability of a second examination for verification where uncommon conditions are found

Treatment of Epidemic Encephalitis—The use of frequent spinal drainage and the employment of hyperosmotic solutions intravenously in elevated instances of epidemic encephalitis are advocated by Hoffman as an addition to our therapeutic armamentarium

Iowa State Medical Society Journal, Des Moines

[illegible] **10** [illegible]

Some Typical Recoveries [illegible]
(Epilepsy) Follow [illegible]
C A L Reed Cases [illegible]
Clinical Significance of [illegible] Examination of the Throat
Sinuses and Ear [illegible]
Chronic Sinus Infection [illegible]
Thyroid C H Mayo [illegible]

Journal of Industrial Hygiene, Boston

[illegible] **2** [illegible]

Health Hazards in Paint [illegible] E G Beardsley and L C Haven Iowa City —p [illegible]
Disposition of Tuberculous [illegible] Communities J S [illegible] New York —p [illegible]
Anthrax T W Lee [illegible] Epidemic —p [illegible]
Industrial Hygiene [illegible] York —p 10
Housing Problems [illegible] Boston —p 165
Phthisis and Occupation [illegible]

Journal of Laboratory and Clinical Medicine, St. Louis

July 1920 5, No 10

*Leukoplakia of Pelvis of Kidney A Study in Metaplasia DeW G Richey Pittsburgh —p 635
*Chemical Changes in Blood in Disease V C Myers, New York —p 640
*Bacillus Influenza in Normal and Pathologic Throats L Arnold Nashville Tenn —p 652
*Localization of Hallucinations H I Gosline, Howard R J —p 657
*Alkalimetry of Whole Blood J B Rieger Detroit —p 668
Variations in Wassermann Reaction E R Wilson Los Angeles —p 670
Leukocytes in Anaphylaxis of Serum Sickness J Rosenbloom Pittsburgh —p 671
Machine for Shaking Blood Counting Pipets R L Haden, Detroit —p 672
Method of Demonstrating Gastric Movements on a Small Animal T L Patterson, Iowa City —p 674

Leukoplakia of Kidney Pelvis and Ureter—Leukoplakia of the pelvis of the kidney and ureter is regarded by Richey as being a pathologic entity which seeks logical explanation on the basis of true metaplasia, entailing a transformation from the normal transitional epithelium, even presenting a superficial laver of keratin It would appear that the absence of a demonstrable membrana propria, plays an important role in the metaplastic process by permanently altering the environment of the lining cells The loss of the basement membrane is the outcome of repeated insults wrought by long continued trauma, either inflammatory, mechanical or both It is possible that a certain number of cases of pyelitis are refractory to appropriate treatment as a result of leukoplakia of the pelvic mucosa As in the buccal cavity, bronchi, esophagus, gallbladder, urinary bladder, prostate, fundus uteri and elsewhere, leukoplakia of the renal pelvis and ureter may be a potential site for subsequent malignant metamorphosis

Studies on Blood Sugar—The general subject of blood sugar and the values for blood sugar and diastatic activity in normal individuals, diabetics, nephritics, and endocrine cases are discussed by Myers

Prevalence of Influenza Bacillus—Observations were made by Arnold on the prevalence of *B influenzae* in average normal throats, in cases of acute rhinitis, and in throats of patients suffering from "influenza'—which was epidemic in Nashville Tenn in February, 1920 Avery's sodium oleate method was used Of eighty apparently normal throats examined, twenty-eight were positive, making 35 per cent carriers of *B influenzae* Of forty-five cases of acute pharyngitis and rhinitis examined, thirty-five were positive, making 77 7 per cent positive One hundred and four cases were selected at random from cases diagnosed as influenza" in the acute stage Ninety were positive, making 87 5 per cent positive *B influenzae* in nasal secretions from acute rhinitis, directly exposed to the air, are not viable if planted on artificial culture medium after ten hours, if exposed to light, but desiccation being prevented they are viable for twenty-four hours anyway

Psychology of Hallucinations—On the basis of laboratory psychology Gosline says that all mental functions can be reduced to the simple processes, sensation association, reaction and inhibition On the basis of this psychology the hallucinations are reduced to simple processes and the results are correlated with the anatomy of the nervous system Psychology is carried into psychopathology for the purpose of making anatomic localizations Gosline attempts to conclude from the patient s symptoms as to whether the pathologic process is an irritative one or a destructive one

New Method of Alkalimetry—Rieger describes in detail a method of alkalimetry which he says gives promise of service in the early stages of acidosis, the prognosis of the more severe grades and the early recognition of impairment of renal function

Journal of Orthopaedic Surgery, Lincoln, Nebr.

July 1920 2 No 7

Open Operation for Congenital Dislocation of Hip H P H Galloway Winnipeg Can —p 390
Variations in Anatomic Structure of Lumbar Spine J E Goldthwait Boston —p 416

Journal of Pharmacology and Experimental Therapeutics, Baltimore

June 1920 15, No 4

Anurias Occurring in Normal Animals During Use of General Anesthetics W deB MacNider Chapel Hill N C —p 249
*Local Anesthetic Actions of Saligenin and Other Phenyl Carbinols A D Hirschfelder A Lundholm, and H Norrgard Minneapolis —p 261
Antagonistic Actions of Epinephrin and Potassium Chlorid on Tonus and Tonus Waves in Excised Terrapin Auricles C M Gruber Boulder Colo —p 271
*Pharmacologic Studies on Arsphenamin M I Smith Washington D C —p 279
*Perfusion of Medulla of Turtle A D Bush, University, N D —p 297
Mechanism of Toxic Action of Cyanogen Chlorid C I Reed Lawrence Kan —p 301
*Tyramin as a Morphin Antagonist H G Barbour and L L Maurer New Haven Conn —p 305
Blood Volume and Blood Volume Methods P D Lamson and T Nagayama Baltimore —p 331
*Presence of Histamin in Extracts of Posterior Lobe of Pituitary Gland and on Preliminary Experiments with Pressor Constituent J J Abel and T Nagayama Baltimore —p 347
Histamin and a Histamin Like Substance as Decomposition Products of Albumoses T Nagayama Baltimore —p 401

Anesthetic Value of Saligenin—From all the facts presented by Hirschfelder and his associates, it would appear that saligenin represents the least toxic or irritant and best anesthetic of all the phenylcarbinols thus far studied by them, that it is many times less toxic than procain, apothesine and similar anesthetics, and that it is well suited for use in practical surgery Although weak solutions of saligenin are devoid of anesthetic effects the epithelial mucous membranes, strong solutions exert a definite numbing effect This is especially marked when freshly prepared 12 per cent solutions are used When a 12 per cent solution of saligenin is applied to the mucous membranes of the mouth or nose, a definite dulling of sensation results

Action of Arsphenamin on Circulation—The mechanism of the action of arsphenamin on the pulmonary circulation, and its relation to the other circulatory effects produced by arsphenamin was studied by Smith Experimental data on the toxicity of arsphenamin following continuous intravenous injection of various preparations into dogs are also presented A few preliminary observations relating to the chemical behavior of arsphenamin toward serum are discussed, and the relation of this to the circulatory phenomena produced by this drug is pointed out The rise in pulmonary pressure produced by intravenous injections of arsphenamin is shown to be due to an obstruction of the pulmonary vessels The nature of the obstruction is chiefly mechanical blocking, or to a constricting action of the pulmonary vessels, depending on the amount of alkali used in making the solution The cardiac dilation following the intravenous injection of arsphenamin does not appear to be a direct effect of the action of the drug but rather secondary to the pulmonary obstruction causing the right heart to work under undue strain and secondarily, to dilate

Action of Epinephrin on Cardio-Inhibitory Center—Bush states that epinephrin does not seem to exert a registrable influence on the cardio-inhibitory center of the striped turtle

Tyramin as Morphin Antagonist—The respiratory stimulants commonly employed to antagonize morphin depression (caffein atrpin scopolamin, narcotin, etc), Barbour and Maurer claim do not posses the advantage of ecbolic action which is exhibited by tyramin Tyramin (from 1 6 to 20 mg per 100 gm) antagonizes the respiratory effects of morphin (from 1 to 1 8 mg per 100 gm) when the two are injected in the same solution The most complete antagonism was noted when 1 mg of morphin was injected with from 6 to 20 mg tyramin the average maximum decrease from normal volume amounting to only one fifth Simultaneous injection of morphin and tyramin in separate subcutaneous regions results in a greater exhibition of respiratory depression than when the drugs are given in the same solution but this is followed promptly by an unusually marked antagonism To account for all of the results obtained it appears necessary to assume both a nonacid and an acid factor in the stimulating action of tyramin

Some Points in Roentgengraphic Examination of Chest with Particular Reference to Lungs J H Dempster Detroit—p 364
Traumatic Chest Surgery R E Balch Kalamazoo, Mich—p 369
*Sphenopalatine Ganglion Headaches R A Barlow, Rochester Minn—p 371
*Case of Wound Diphtheria G J Curry, Flint Mich—p 376

Sphenopalatine Ganglion Headaches—The twelve cases cited by Barlow show that there is ample evidence to demonstrate the existence of a sphenopalatine ganglion syndrome and to distinguish it from the so-called migraine headache The results of treatment in thus type of headache are sufficiently encouraging to warrant its study and investigation Barlow believes that eventually a form of operative treatment will be developed such as is now used in the gasserian ganglion cases, which will offer more complete and permanent relief In the meantime, by conservative measures many patients can be relieved whose suffering may even result in an economic loss to society

Wound Diphtheria—In Curry's case, the condition developed in a suppurating wound following the excision of the right fibula for chronic infective osteomyelitis, of twenty years' standing Eighty-one days elapsed from the time of the first positive culture until the last negative one, the first fifty-six days of this period being the active stage of the disease

Military Surgeon, Washington, D C

July 1920 **47** No 1

Modern Military Medical and Surgical Reconstruction and Measures of Cooperation Practiced by Medical Department of Army and Federal Board for Vocational Education F Billings Chicago—p 1
Spectacles for Soldiers Comparison of American and German System of Supply R A Fenton Portland Ore—p 14
Relation of Defective Mental and Nervous States to Military Efficiency F G Norbury Springfield Ill—p 20
Compound Fractures Treated by Bone Graft L J Owen, Ft Sheridan Ill—p 40
Some Newer Work on Nephritis E D Kremers Ft Sheridan Ill—p 48
Operation of Medical Division of Air Service Since Signing of Armistice A E Truby and J Dibble—p 67
Malaria Drainage Operations at Port of Embarkation W B Herms Newport News Va—p 81
Some Commonly Misapprehended Points in Diagnosis of Pellagra J Goldberger—p 94
Lessons of War Which May be Applicable to Civil Practice J Smyth—p 100
Chronic Urethritis and Prostatitis Dependent on Colon Bacillus Infection C E Verdier—p 109

Missouri State Medical Association Journal, St Louis

July 1920 **17**, No 7

Use of Radium in Carcinoma of Face, Jaws and Oral Cavity E Fischel St Louis—p 267
Actual Cautery in Treatment of Superficial Cancers C F Sherwin St Louis—p 269
Modern Treatment of Malignancies L A Marty, Kansas City Mo—p 271
Inoperable Cancer W E Leighton St Louis—p 273
Treatment of Syphilis E L Spence Fulton Mo—p 276

Nebraska State Medical Journal, Norfolk

July 1920 **5**, No 7

Rights of Patient H W Orr Lincoln—p 185
*Intestinal Indigestion in School Children H M McClanahan, Omaha—p 189
Malignancies of Mouth and Neck E H Skinner Kansas City Mo—p 194
Value of Lumbar Puncture as Diagnostic and Therapeutic Procedure A A Johnson Omaha—p 197
Intra Abdominal Injection of Oxygen as an Aid in Roentgen Ray Diagnosis C H Ballard Omaha—p 199

Intestinal Indigestion in Children—In this paper is presented a review of the histories of ninety-six children, ranging in age from 6 to 12 years The chief symptoms in all of these cases pertained to the gastro-intestinal system In none was there any organic disease The outcome of the cases verified the conclusion that perverted function, what might be termed functional pathology of the digestive organs, was the cause of the symptoms Among the predisposing causes mentioned by McClanahan, are heredity (in twenty-four cases in this series there was a history of some nervous condition in one or both parents), home conditions and the habits of the child also figure in the etiology Contributing factors are tonsils and adenoids, diseased teeth an excess of the acid type of foods in the diet, and anatomic conditions Treatment along common sense lines as suggested by roentgen-ray findings resulted most satisfactorily in probably 90 per cent of the cases McClanahan insists that a thorough examination of the child be made before treatment is begun In the diet he has included the cereals, milk, meat only once a day, potatoes, rice and tapioca and such vegetables as parsnips, carrots, beets, cauliflower, squash, lettuce, celery, fruit, both cooked and raw The diet is varied with the individual case Tea and coffee are not allowed Intelligent cooperation of the mother, good will and obedience of the child are aids in carrying out proper treatment Plenty of sleep and rest are also essential Drugs have an important place in the treatment, but often they are used to excess For the relief of constipation McClanahan gives the following powder once a week, resin podophyllin, 1/10 grain, rhubarb, 2 grains, sodium bicarbonate, 5 grains This is given at bedtime, and the following morning before breakfast a cathartic is given, usually sodium sulphate in hot water A little lemon juice added to this will make it more palatable When the stools were hard, liquid petrolatum was of advantage in fifteen cases, in five it produced no result Another cathartic is a combination of equal parts of fluidextract of senna and aromatic cascara, from one-half to one teaspoonful, at bedtime In cases of meteorism, milk of magnesia, ½ ounce at bedtime, is of apparent benefit A bitter tonic after meals has given good results or tincture of nux vomica alone In cases complicated by secondary anemia, Blaud's pill, 3 grains, morning and night is of value In three cases with considerable abdominal distention associated with pain, the abdominal binder gave decided relief

New Orleans Med and Surgical Journal, New Orleans

August 1920 **73**, No 2

Importance of Early Recognition and Treatment of Glaucoma D T Atkinson San Antonio Texas—p 50
Spastic Constipation J M Perret New Orleans—p 53
Leprosy in United States I Dyer New Orleans—p 57
Case of Multiple Lesions in Leishmaniosis O Torres, Bahia Brazil—p 61

New York State Journal of Medicine, New York

July 1920 **20**, No 7

*Antiscorbutic Vitamin A F Hess New York—p 209
*Fat Soluble Vitamin L B Mendel New Haven Conn—p 212
Water Soluble Vitamin T B Osborne New Haven Conn—p 217
Comparative Study of Diagnosis of Specimens from Cases of Typhoid Fever Tuberculosis and Diphtheria in Different Laboratories of New York State F Finley and J S Lawrence Albany, N Y—p 226
Surgical Treatment of Hyperthyroidism—Relation Existing between Amount of Gland Removed and Permanency of Relief G E Beilby, Albany N Y—p 230

Antiscorbutic Vitamin in Canned Tomato—Canned tomato, Hess says, is the most serviceable antiscorbutic for artificially fed infants It is well borne, comparatively inexpensive, and is available Canned tomatoes may be regarded, from a nutritional standpoint as a palatable solution of the three vitamins Hess recommends it unreservedly in doses of 1 ounce a day By substituting it for orange juice a great saving has resulted

Fat-Soluble Vitamin in Butter—About 0.1 gm butter fat fed daily in addition to an otherwise adequate diet Mendel says suffices to enable rats to reach adult size before they show symptoms of nutritive decline that are remediable by further increments in this supply of fat-soluble vitamin With feeding results were even more favorable, incipient decline being averted until a later period Even more striking have been the results with dried tomato which served, in daily doses of approximately 0.1 gm, as the source of fat-soluble vitamin in a period of fourteen months within which the animals rapidly grew to large adult size These illustrations indicate the relative richness of some of the edible vegetable products in fat-soluble vitamin

Northwest Medicine, Seattle

July 1920 **19**, No 7

Diseases of Ethmoid and Sphenoid Sinuses J H Harter, Seattle—p 165
Diagnostic Value of Estimation of Basal Metabolic Rate J E Else, Portland Ore—p 171

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Japan Medical World, Tokyo

June 12, 1920 **10**, No 24

Pathology of Puerperal Eclampsia K Obata —p 517 To be cont'd

June 19 1920, **10**, No 25

Pathology of Puerperal Eclampsia K Obata —p 541 To be cont d

Journal of Tropical Medicine and Hygiene, London

July 15 1920 **23**, No 14

Fifteen Years Experience with Malaria in Upper Congo A Pearson —p 177
Colloidal Drugs in Treatment of Bilharziasis in Young People F G Cawston —p 180
*Quinin Prophylaxis W M McDonald —p 182
Use of Tourniquet in Operations for Elephantiasis of Scrotum R Howard —p 183

Quinin Prophylaxis Against Malaria—MacDonald is convinced that quinin prophylaxis, efficiently and promptly applied to troops entering for the first time a malarious region, would greatly reduce the incidence of malaria and should eliminate the possibility of any sick rate from benign tertian infection To be of value, however, quinin should be administered on parade so as to avoid the probability of the dose being lost or hidden if left to the individual to take or not as he pleases Secondly, as it is of importance that the parasites should be caught in the early stages quinin should be administered daily, 7 5 gm per day, in preference to large doses at intervals of several days

Lancet, London

July 24 1920 **2**, No 5056

*Psychology of Special Senses and Their Functional Disorders A F Hurst —p 169
*Nerve Symptoms in Acute Infections T Horder —p 174
Intravenous Use of Acetyl Aminophenyl Salt of Antimony (Stibenyl) P Manson Bahr —p 178
Sudden Deaths on Active Service T H G Shore —p 180
*Intrinsic Cancer of Larynx. St C Thomson —p 182
Psychologic Aspect of Effort Syndrome M Culpin —p 184
*Symbiotic Growth of B Proteus and B Tuberculosis E T Thompson —p 186
Mixed Cultures R A O Brien —p 187

Psychology of Special Senses—Cutaneous sensibility and cutaneous anesthesia are the topics taken up by Hurst in this lecture Apart from actual hysterical symptoms there are no underlying physical or mental symptoms or group of symptoms which precede and accompany them and persist after their disappearance, to which the term hysteria can be applied It is clear, therefore, that while it is easy to define hysterical paralysis and hysterical anesthesia, "hysteria' cannot exist in their absence The only possible definition of hysteria is 'the condition in which hysterical symptoms are present," hysterical symptoms being in turn defined as "symptoms which result from suggestion, and are curable by psychotherapy", hysteria is thus a condition in which symptoms are present which have resulted from suggestion and are curable by psychotherapy The subject is discussed fully and amplified by case reviews

Nerve Symptoms in Acute Infections—The mechanisms, physiologic and histologic, by which nerve symptoms in acute infections are produced are discussed by Horder Nerve symptoms arising as part of the interaction already referred to are directly referable to one or more of three different processes by which the nervous system becomes implicated (1) by toxemia, (2) by infection of the meninges, (3) by infection of the nerve tissues themselves In the first of these three mechanisms the nerve symptoms manifested by the patient are chiefly 'functional' in origin, in the second and in the third of these mechanisms the symptoms are chiefly 'organic' in origin The great significance of these mechanisms lies in this distinction The mechanism of toxemia is the one operative in diphtheria and tetanus in the great majority of cases It is also that by which nerve symptoms arise in most cases of pneumonia typhoid fever, scarlet fever and rheumatic fever Secondary infection of the meninges occurs not infrequently in pneumococcus infection and is relatively more common when the primary infection occurs in the middle ear In measles the nerve symptoms are usually toxemic, but the specific virus, though it causes meningism not infrequently, rarely causes a true meningitis That it occasionally sets up an encephalitis or a myelitis, however, has been long recognized In mumps an actual inflammation of the central nerve structures sometimes occurs, and recent experimental work suggests strongly that the virus in this disease has group affinities with the causative virus or poliomyelitis It is possible that the virus of infantile cholera has similar affinities In generalized tuberculosis the mechanism of encephalitic as well as meningitic involvement may be added to that of a toxemia In cerebrospinal fever the meningococcus attacks the pia arachnoid in primary fashion, and this is by far the chief mechanism of production of the long series of symptoms presented in the disease In poliomyelitis and in encephalitis, be the virus identical or only possessed of group affinity, the primary infection is in the central nervous system itself, through intimate vascular infiltration The nerve symptoms present in influenza, though protean in nature, are probably due, in the main, to a toxemia, which may be of any degree from mild to intense, meningism is not uncommon, meningitis is rarely present

Mobility of Cord in Cancer of Larynx—Of forty-four cases analyzed by Thomson the affected cord was quite mobile in twenty-seven In the remaining seventeen cases its movements were more or less impaired, the degree varying from mere sluggishness to complete fixation In three of these latter cases the effect in movement developed while the cases were under observation It was only possible to remove a satisfactory portion of growth before operation for microscopic examination in ten out of these forty-four cases But it is noteworthy that in eight of these ten cases the cord moved freely Concluding Thomson says that impaired mobility of a cord is not a necessary or frequent symptom of intrinsic cancer of the larynx It is, in fact, only met with in a minority of cases presenting themselves for diagnosis It is more apt to be met with in an early case when the growth is embedded in the cord or growing into it than in a distinctly sessile or even pedunculated tumor It is also more usual with growths situated on the inner surface or the subglottic area than with those seated on the upper surface of the cord Otherwise, fixation indicates an advanced case When present it is a very valuable symptom in distinguishing a malignant from an innocent tumor It is of little value, and may even be misleading in diagnosing a malignant growth from a tuberculous or syphilitic deposit As regards prognosis, it is an unfavorable symptom

New Organism Discovered by Symbiotic Growth—Four strains of *B tuberculosis hominis* and one strain of *B tuberculosis* (bovine) were grown by Thompson on large tubes of glycerin-brain agar for one month, after which time sufficient glycerin-veal broth was added to cover the growth, and inoculated with *B proteus* In all the mixtures a diphtheroid organism was observed at the end of ten days Yeastlike odor is apparently characteristic of this remarkable phenomenon as it was noticed in all the tubes Furthermore, the dense turbidity due to the growth of *B proteus* had disappeared on the formation of this new organism Subcultures made on surface agar showed no growth at the end of seven days the proteus having died out In stab glucose agar, inoculated from the mixture, a growth was observed at the end of three days, which was strictly anaerobic The growth was a compact one starting about half way from the surface of the glucose agar On microscopic examination it was found to be the diphtheroid organism observed in the mixtures Morphologically and culturally this organism is identical with the acne bacillus Thompson suggests that his experiments show that the acid-fast organisms and the streptothrices are closely related

Medical Journal of Australia, Sidney

June 19 1920 **1**, No 25

War Amputations of Lower Limb A V Meehan —p 571
Vincent s Disease J V Duhig —p 575
Food Poisoning due to Bacillus Aertrycke R Dick —p 576
Splinter of Wood in Anterior Chamber J L Gibson —p 577
Neuro Muscular Atrophy A Watkins —p 577

Poisoning with Bacillus Aertrycke—In Dick's cases of acute gastro enteritis sausage meat was the source of the infection No sample of the incriminated sausage was obtainable but from the symptoms shown by these patients and the results of the serum reactions Dick concludes that this is an example of food poisoning due to *B aertrycke*

South African Medical Record, Cape Town

June 26 1920 18 No 12

Experiences in East African Campaign R D A Douglas—p 223
Advances in Medicine Since the War A W Falconer—p 229

Annales de Medecine, Paris

1920 7 No 3

Advantage of Measuring Size of Pleural Cavity in Course of Pneumothorax L Bard—p 169
Schick Diphtheria Reaction J Renault and P P Levy—p 180
Phenomena with Reinjection of Serums Pehu and P Durand—p 196
Premonitory Local Pains with Cancer Metastases A Cramer—p 226
Present Status of Yellow Fever J Paraf—p 232

Phenomena with Reinjection of Serums—Pehu and Durand analyze seventy eight cases in which the antiserum or antitoxin had been reinjected within three months and forty-two in which the interval was longer comparing them with others on record Darre has applied to intraspinal serotherapy the Besredka method of a preliminary small dose waiting from one to three hours before the main injection They emphasize however, that this protects only against the immediate phenomena the nervous or cardiovascular shock It does not protect against serotoxic eruptions and edema These are liable to occur after any injection first or second and the hypersusceptibility may long persist The serotoxic reactions are usually harmless

In their experience preexisting heart symptoms did not afford any predisposition to cardiovascular shock, and the serotoxic symptoms were not reenforced The reaction to the first injection is no criterion as to what the reaction to the second will be the route for the injection seems to be the preponderant factor, especially the intraspinal and intravenous routes In two of their cases there was intense cardiovascular shock in less than two minutes after the second injection, in the child of 4 a preliminary intraspinal injection of 0 5 c c had been given followed in half an hour with 1 c c The collapse was alarming but two hours later 10 c c of the antiserum was injected without incident The child died ten days later the meningitis having flared up anew In the other case 2 c c had been injected by the vein and the symptoms of severe collapse and shock subsided in two hours and the child recovered Three other children of 2 and 4 died after the reinjection given nearly five six and nine weeks after the first Necropsy showed nephritis in two, a large thymus (15 gm) and small cheesy focus in the right lung in the other Horse antitoxin had been used first and, for the second injection, goat serum from the renal vein, possibly crossed anaphylaxis might be incriminated In conclusion they report success with Mery's method of repeating the injection weekly, whether there are other indications for it or not thus warding off the development of anaphylaxis They gave the weekly reinjections subcutaneously and no phenomena followed but this method is applicable only when the second injection can be made during the weeks immediately following the first If acute nervous or cardiovascular shock develops the fluid injected into the spine can be withdrawn Epinephrin in cardiovascular shock has often rendered valuable service

Archives de Medecine des Enfants, Paris

July 1920 23 No 7

Natality and Infant Mortality P Nobecourt and G Schreiber—p 385
Cont'd
*Alimentary Test in Infants E Terrien—p 404
Ether Treatment of Pneumonia in Children M La salle—p 414
Amyotrophy in Infant from Shell Concussion P Haushalter and P Kahn—p 423

The Fiction of the So-Called Alimentary Test as Guide in Infant Feeding—Terrien presents arguments that the alimentary test—the reaction to cow's milk when the amount is increased watching whether the infant gains or loses in weight and thrives—is far from being a reliable guide to the proper food for the child The fact that the child is unable to digest unmodified cow's milk does not prove that it cannot digest other foods

Ether Treatment of Bronchopneumonia in Children—Lasalle recalls that this disease is nearly always secondary to a pathologic state measles whooping cough influenza etc and that the infection spreads in two different ways causing the common or the suffocative variety according to whether the infection is direct or caused by embolization of the septic agent He compares the evolution of bronchopneumonia to that of a furuncle and points out the striking analogy between these two processes the main difference being the medium in which the infection acts The treatment of a furuncle after incision being asepsis he conceived the idea of treating bronchopneumonia with ether to realize asepsis and obtained wonderful results The injected ether leaves the body through the lungs and being a powerful disinfectant is capable of impairing the vital conditions of the microbes in the lungs Unlike oxygen ether enters everywhere its action is (1) anti-infectious (2) anti-thermic (3) anti-spasmodic and (4) toni-cardiac while it is harmless The result depends less on the quantity than on the moment of the injection the earlier it is made the better Generally 1 c c every four hours will do sometimes even only morning and night Often one injection is enough The treatment of bronchopneumonia should thus be first ether then heart tonics and then revulsion with mustard He reports some typical cases to show the benefits of this treatment and states that he never witnessed any injurious by-effects in his more than 200 injections of the kind

Bulletin de l'Academie de Medecine, Paris

June 29 1920 83 No 26

*Common Origin of Varicella and Zona A Netter—p 588
*Splenectomy in Hemolytic Jaundice H Hartmann—p 599

Common Origin of Varicella and Certain Cases of Herpes Zoster—Netter has compiled from the literature fifty nine cases in which herpes zoster was followed by chicken pox in the contacts and ten cases in which varicella was followed by cases of herpes zoster This connection between varicella and zona was evident in three cases in his service Several cases of one of these diseases developed after a case of the other with scarcely a possibility for contagion from outside The intervals were about the same as the intervals with varicella In sixteen of the cases the two diseases ran their course in the same person almost simultaneously The eruption which sometimes develops along the course of herpes zoster resembles closely that of varicella

Splenectomy in Hemolytic Jaundice—In Hartmann's case the patient and a brother had both presented hemolytic jaundice since childhood and the spleen was extremely large On exposure of the spleen to the roentgen rays pains developed in the region but after splenectomy not only the pains but also the jaundice disappeared in two days In two other cases the erythrocytes numbered only 1 200 000 and 1 870 000 but the blood picture rapidly improved after splenectomy This group of three cases is the first to be published in France he says in which the outcome was a great success In the discussion that followed Vaquez related that he was the first to remove the spleen for hemolytic jaundice with splenomegaly (1907) but his patient died and he was severely criticized for his reckless interference

Bulletins de la Societe Medicale des Hopitaux, Paris

May 14 1920 44 No 17

Epidemic Encephalitis P Marie and other—p 661 668 685 689
Skin Bronchial Fistula C Achard and A Leblanc—p 664
Oculopilomotor Reflex J A Sicard and J Paraf—p 676
Silent Abscess in Frontal Lobe G Guillain and F Lalert—p 691

Oculopilomotor Reflex—Sicard and Paraf relate that slight rubbing or pinching of the intercostal region may be followed by a pilomotor reflex in the arm on that side if gooseflesh is easily induced This positive reflex can be arrested by compressing the eyeballs This inhibiting reflex seems to be constant but the pilomotor positive reflex is variable and inconstant even in the same person It shows that compression of the eyeballs may have multiple and varied effects

not only on the pneumogastric, slowing the heart rhythm—the oculocardiac reflex—but also on the sympathetic, inhibiting the pilomotor reflex There are also the oculopolyuric reflex the oculoglycosuric reflex and the oculo-albuminuric reflex These reflexes generally occur dissociated in different subjects and they must not be taken too seriously in differential diagnosis

Journal de Medecine de Bordeaux

April 25 1920 **91** No 8

Monstrosities of the Brain G Jeanneney —p 195 Concn
Medicolegal Cases of Infanticide P Lande —p 200
Sarcoma of Small Intestine Recurrence Three Months After Double Resection A. Charrier —p 202
Congenital Displacement of Kidney Jeanneney and Blanchot —p 204

May 10 1920 **91** No 9

Immobility of the Thorax with Emphysema Creyx —p 227
*Continuous Aspiration in Surgery L Rocher —p 235
Spa Treatment and Otorhinolaryngology Got —p 237

Continuous Aspiration in Surgery—Rocher expatiates on the advantage of keeping up aspiration at all operations but especially with abdominal and throat surgery If the assistant manages the suction tube skillfully, the whole operation proceeds clean and fast, there is less danger of hemorrhage as there is no need to wipe off bleeding surfaces and thus open the bleeding mouths of the vessels The operation is shortened by a half, and with it the danger of hemorrhage When pus escapes into the peritoneum or elsewhere, the continuous aspiration sweeps it away in many cases otherwise doomed The assistant watches for any escaping pus and sucks it up at once as the first drops appear Two cases of gangrenous appendicitis are described to show the advantages of this technic which he has been applying for years, dispensing with sponges and warding off vomiting

Journal de Radiologie et d'Electrologie, Paris

February 1920 **4** No 2

Facial Paralysis and Radiotherapy Delherm and Laquerriere —p 49
Radiography of Head of Femur to Aid in Operating P Japiot —p 65
Radiography of Shoulder Chassard —p 68
Dorsal Luxation of Wrist F Arcelin —p 71
Luxation of Semilunar Bone in Wrist R Desplats and P Buffe —p 73
Radiography of Subphrenic Gas Abscesses I Solomon —p 74
Radioscopy of Pulsion Diverticulum Lagarenne and Guilleminot —p 76

Paris Medical

June 12 1920 **10** No 24

Radiology of the Kidneys Ribadeau Dumas and others —p 481
Splenopneumonia and Interlobar Pleurisy P Ardin Delteil and Raynaud —p 487

June 19 1920 **10** No 25

Microbian Carapace" Dermo Epidermitis H Gougerot —p 497
Lethargic Encephalitis G Laroche and Filassier —p 501
*Valsalva's Experiment in Semeiology of the Heart Maudru —p 504
Congestion of the Apex in Typhus Dumitresco Mante —p 505
Apneic Origin of Emotional Jaundice L. Plantier —p 506

Valsalva's Experiment in the Semeiology of the Heart—Maudru says that forced expiration after a deep inspiration, the mouth nose and glottis being tightly shut deserves attention as a means to distinguish an organic from an inorganic heart murmur The effort experiment allows a better exploration in this sense that by holding the lung still and slowing the pulsations of the heart, it becomes easier to recognize whether the murmur is organic or inorganic, and by the more intimate contact of the pericardium layers, a hitherto unsuspected or more characteristic friction sound may be heard

Presse Médicale, Paris

July 3 1920 **28** No 45

*Diagnosis in Psychiatry M. Laignel Lavastine —p 441
*Incision of the Cervix to Promote Delivery A Schwaab —p 443
Mineral Waters and Anaphylaxis J Galup —p 445

The Diagnosis in Psychiatry—Laignel-Lavastine comments on what he calls the picturesque phase of mental disease, that is the phase in which the painter portraying the attitude, the costume and the reactions to the environment shows at a glance the nature of the mental disturbance The picturesque the psychiatric and the biologic diagnosis have to be considered in turn and in the proper perspective and he relates four typical cases to demonstrate how this should be done "proceeding from the picturesque reaction to the syndrome the affection, and the malady" One of his examples is that of an unmarried woman interned at the request of her physician, the object of her erotic persecution The perspective diagnosis was erotomania in a hypomaniac from hyperthyroidism resulting from acute articular rheumatism at the age of 24 As a rule, however, psychiatry, as well as internal medicine, rests on the tripod alcoholism, tuberculosis and syphilis

Incision of the Cervix to Promote Delivery—Schwaab recommends lateral rather than median incisions, and states that the only one of his seven patients treated in this way who had developed fever was already febrile when the cervix was incised He declares that this method for rapid dilatation of the cervix is no more dangerous than other emergency procedures for the purpose, and has a well defined place in obstetrics

July 7 1920 **28**, No 46

Ear and Throat Complications of Typhus A Costiniu —p 453
*Mental Disturbances in Syphilitics A Barbe —p 454

Mental Disturbances in Syphilis—Barbe reviews extensive literature on this subject, and reiterates that there is no special type of psychoses peculiar to syphilis It has only recently been recognized that syphilis, like any infectious disease can induce mental disturbances, besides those of general paresis The true toxic-infectious syphilopsychoses are those of the secondary period, traceable to the meninges They usually appear about the fortieth day after the primary lesion and the onset is sudden, like a toxic delirium Loehe has reported a case of jacksonian epilepsy coma and death, three months after infection, and hemiparesis has been observed and one case of hemiplegia is on record, but there is nothing characteristic about the mental confusion or toxic psychosis of this phase except the improvement under specific treatment

July 10 1920 **28** No 47

*Grave Anemia with Uremia C Aubertin and J Yacoel —p 461
*Vertigo M Vernet —p 462
Glioma of Nasal Fossae Anglade and Philip —p 464

Severe Anemia with Chronic Nephritis—Aubertin and Yacoel relate that the anemia was so grave in some of their eleven cases of nephritis with uremia that it masked the causal kidney disease as also in one of six cases without uremia There was a tendency to edema in only four of the total seventeen but the polynucleosis averaged 80 per cent although the leukocyte count was generally normal and there were no secondary infections to explain it The marrow seemed to be incapable of replacing the destroyed corpuscles and hence the evolution of this grave anemia was rapid In two cases described in detail, the girl of 21 and man of 27 died in six and eight months after the first symptoms The anemia seems to be usually the work of the uremia and fluctuates with this

Epinephrin in Treatment of Vertigo—Vernet remarks that hitherto little has been done to combat the primal cause of vertigo which he defines as a loss of vasotonic balance in the internal ear from disturbance in the sympathetic nervous system We have in epinephrin he says, a means to restore the balance as it stimulates the nerve terminals regulates the blood pressure and has an antitoxic action In the last four years he has thus treated large numbers of patients, giving from 5 to 20 drops of the 1 1000 solution of epinephrin twice a day suspending it for a time after ten days then resuming Old and advanced lesions of the cochlea were not benefited in some cases drugs to act on the vagotonia were found useful adjuvants He regards this endocrine treatment as more promising than any other yet known

July 14 1920 **28** No 48

Bone Transplantation' not Grafts R Leriche and A Policard —p 473
*Inorganic Motor Disturbances M Briand and A Rouquier —p 473
Pains Like Electric Shock Consecutive to Trauma of Back of Neck R Dubois and J Ribeton —p 474
*Nature and Treatment of Diabetes F Farges —p 475

Inorganic Motor Disturbances—Briand and Rouquier state that they have encountered recently a number of cases of

motor disturbances which would most certainly have been classed as hysteria if it were not for the prevailing epidemic encephalitis Evidently they belong in this latter group and they sustain the assumption of some infectious element as a factor in the so-called inorganic motor disturbances

Diabetes—Farges recalls that the sugar in the blood is derived from the glycogen in the liver and not directly from the food, and that levulose and lactose do not induce glycosuria or hyperglycemia in diabetics Even when glucose or saccharose is taken with the lactose no further reducing power is conferred on the diabetic urine His course of treatment is with restriction to 2 liters of milk to which he adds 200 mg, more or less, of lactose. In one of his twenty cases the man had 20 gm sugar per liter, with 2 100 c c of urine, when first examined His diet was not changed except that he took 20 gm of lactose daily for a week The glycosuria was then 7 85 per liter, then the diet was restricted to 2 liters of milk and 100 gm of lactose, and in four days the urine was free from sugar Then eggs, veal, chicken and green vegetables were allowed in addition and during the several months to date his health has been perfect, with no trace of glycosuria *One woman of 61 with 37 76 per sugar* per liter and 2,400 c.c urine was put on the milk and 125 gm of lactose and in three days the urine was free from sugar In another group of cases the glycosuria showed marked reduction under the lactose from 85 5 gm in the twenty-four hours, to 3 15 gm for example after a week of the milk and lactose but when this threshold of sugar excretion was reached it was impossible to drive it any lower down This individual threshold keeps invariable and it is exclusively for glucose The higher the threshold in the urine the higher the glucose content in the blood With a threshold of 50 gm the prognosis is favorable under diabetic restrictions but above 200 gm death is imminent within a few months The threshold seems to be determined by the liver he says, it produces more sugar, the graver the disease Diabetes, therefore is the result of a perversion of a physiologic function the sugar excretion of the liver Experimental research, he adds, has confirmed this

Progrès Medical, Paris

June 5 1920 **35**, No 23

Classification of Epidemic Encephalitis H Roger—p 247
Mineral Waters in High Blood Pressure A Piatot.—p 249
Lactic Acid and Lactic Ferments G Faroy—p 253
*Sex of Skeleton Shown by Atlas M Baudouin—p 255

June 12 1920 **35** No 24

Classification of Digestive Disturbances in Infant. A B Marfan—p 259
Mineral Waters in Chronic Rheumatism L Bertier—p 262

Diagnosis of Sex of Skeleton by Shape of the Atlas—Baudouin has found that the glenoid fossa is longer and wider in men than in women and says that this 'glenoid index" will determine the sex of a skeleton He gives the findings in twenty-two skeletons from the Vaudancourt prehistoric burying place

Schweizerische medizinische Wochenschrift, Basel

July 1 1920 **50** No 27

*Tuberculin Treatment H Sahli—p 557
*Chemistry of Thyroid Secretion E Herzfeld and R Klinger—p 567
*Significance of Slight Rise of Temperature in the Tuberculous H J A van Voornveld—p 567 Begun in No 26 p 539

Intradermal Tuberculin Treatment.—Sahli inaugurated the multiple inoculation of tuberculin with his *Nadelschnepper,* and states that this is proving in many hands a convenient and effectual method for tuberculin treatment The large number of pricks multiplies the areas for absorption while patients do not shrink as much from it as from a subcutaneous injection But he now prefers intradermal injection of the tuberculin as an improvement over all other methods This allows greater precision in the dose and the local reaction to the tuberculin generates local production of antibodies, which aid in immunizing It has further the advantage that the local reaction is an index of the degree of immunization that has been realized and a guide to the dose of tuberculin to use to avoid injurious effects, as the skin seems to be far more sensitive to tuberculin than all other tissues He emphasizes that intradermal tuberculin treatment and prophylaxis belong to the general practitioner as he sees the cases in the earlier stages when tuberculin treatment offers the greatest chances for success

Chemistry of the Thyroid Secretion—Herzfeld and Klinger report the results of experiments on tadpoles which apparently demonstrated that thyroid extract from which all traces of iodin had been removed displayed the same biologic action as if the iodin had not been extracted They regard this as testifying that the iodin content of the thyroid secretion has nothing to do with its biologic action

Significance of Slight Fever in the Tuberculous—Voornveld warns that when the rectal temperature shows a rise to 37 7 or up to 38 C (100 4 F) after an hour's walk, this suggests suspicion that something is wrong but it by no means testifies to tuberculosis, not even when the temperature goes still higher than this Individual habits must also be considered a letter carrier would react differently from an office clerk Halt an hour of repose after the test exercise should bring the temperature down to within three tenths of a degree Centigrade of what it was before the walk [Three tenths of a degree Centigrade is nearly six tenths of a degree Fahrenheit.] If the temperature takes longer than this to decline it is strongly suspicious of serious pathologic conditions and tuberculosis is usually responsible On the other hand the lack of a temperature reaction is not an infallible sign that conditions are normal

When the thermal reaction to exercise is approximately normal in the tuberculous this testifies that the focus is more or less healed and isolated Abnormal fluctuations in the temperature during repose, even if the rise is very slight demand strict enforcement of repose This point is the one most often neglected either the rise is overlooked or is regarded as too slight to be heeded He says that he has seen hundreds of patients die from the progress of their disease because the slight rises in temperature during the early curable stage had not been heeded Physicians must realize that it is just as wrong to allow patients with even a slight rise in temperature to go for a walk or to work as for a surgeon or obstetrician to neglect asepsis He records the temperature every two hours at first to ascertain the individual type also the monthly type in women The temperature is taken several times a day in the febrile and from once to three times in the afebrile then gradually only once in two three or seven days interposing an occasional day in which the temperature is taken oftener These conclusions are drawn from Voornveld's own observation and experience, but are sustained by literature which he cites

Policlinico, Rome

May 24 31 1920 **27** No 21 22

*Medical Treatment of Dysenteric Abscess of Liver T Pontano—p 571 Concl in No 24 p 607
*Fatal Sero Anaphylaxis A Pozzo—p 585

Medical Treatment of Liver Abscess—Summarized recently, page 438

Fatal Sero-Anaphylaxis—Pozzo reports from Venice the necropsy findings in the case of a woman of 34 given repeated injections of commercial antistaphylococcus serum in treatment of acute articular rheumatism He ascribes to anaphylactic toxic action the fresh thrombophlebitis in the common iliac the fatty degeneration in liver and kidneys and he cyanosis of the limbs with symmetrical gangrene of the palms

June 28 1920 **27** No 26

Addison Disease in Malaria V Furno—p 668
Endocrine Factors in Gastric Ulcer T Silvestri—p 673

Endocrine Origin of Gastric and Duodenal Ulcer—Silvestri compares the results of his own experimental research with suprarenalectomy and that of others in this line pointing out that the results differed in respect to consecutive development of ulcer according to whether the animal was gravid or not The tendency to ulcer production is sustained by vagotonia but castration and pregnancy neutralize vagotonia and hence arrest the tendency

Semana Médica, Buenos Aires

March 11 1920 **27** No 11

*Inflammatory Endotheliomas A Gutierrez —p 353
*Spontaneous Abortion of Diseases C Citrino —p 357
*Functional Diagnosis of the Liver Tiburcio Padilla —p 363
History of Care of Insane at Buenos Aires J Ingenieros —p 376

Endotheliomas—In Gutierrez s case the previously healthy woman of 33 developed a progressive subacute subcutaneous dermatitis—inflammatory lymphangi-endotheliomas with neoplastic elements Some of the bunches were excised but more and more kept coming Treatment with radium caused the subsidence of some of the bunches but the region ulcerated Nine photomicrograms are given

Aborting of Diseases—Citrino recalls that any and every disease may get a foothold and then die out before it has had time to develop the characteristic clinical picture This is the explanation of many puzzling transient morbid conditions, and it also explains the development of disease in the apparently healthy when the vitality becomes depressed from any cause This was shown by the development of malaria in France in native troops from malarial zones who had not had malaria at home It was disconcerting to observe that malaria could be acquired in France, but it soon proved that the men had been healthy carriers The stress of army life had broken down their resistance

Tests of Liver Functioning—Tiburcio Padilla gives the technic for the various functional tests in vogue, but comments that none of them can be relied on implicitly as kidney functioning may modify the findings in blood and urine Bile itself has comparatively little importance as it is merely a residual product, like coke in a gas plant The conclusions as to liver functioning have to be based on the oversight of the whole, the persistency and the intensity of the responses to the tests The only liver test which throws light on the prognosis is the camphor test although even this is not infallible He has obtained negative results with this test in transient jaundice or other conditions in which there could be no question of an irreparable loss of the liver function

March 18 1920 **27** No 12

*Menacing False Croup F Cardey —p 389
Gonorrhea Diagnosis and Pathology E Castaño —p 392
Etiology of Measles J A López —p 396
*Pepsinogenesis and Lymphocytosis A J Pavlosky —p 398
Pathologic Suicide R Bosch Jr —p 405

False Croup—Cardey explains that grave false croup is an inflammation of the larynx and trachea in children with the exudative diathesis Intubation is of little use the excessive secretion blocking the lumen of the tube and preventing its getting a hold so that it is promptly expelled, and it is impossible to keep replacing it through the whole course of the tracheitis which may last three weeks or more In several of his cases, the difficulty in breathing was just as pronounced the twentieth day after tracheotomy as at first whenever he attempted to remove the tube Diphtheria antitoxin is absolutely useless and usually aggravates the condition He ascribes the croup in great part to the improper food the children are getting, which aggravates the tendency to the exudative diathesis The children were all between 1 and 4 years old the age at which improper diet causes the greatest disturbances The practical conclusion from his experience is that children with this diathesis should have their diet regulated with exceptional care to ward off this false croup If it develops and resists ordinary measures, tracheotomy should be done without delay The air should be kept moist with steam and moist heat should be applied to neck and chest, and the food be mainly cereal and vegetable gruels and soups, with fruit juices

Origin of Pepsin—Pavlovsky reports research which has apparently demonstrated the important share of the spleen in the formation of the gastric ferments and that injections of spleen extract increase the quantity and improve the quality of the secretion in the stomach Injections of fresh leukocytes and red corpuscles from the horse acted in the same way All confirm the role of the spleen in normal digestion as well as in blood production and sustain the principle that the secretion of an organ is perhaps the best stimulant to promote its secretory function He gives the details of series of tests on dogs with a Pawlow gastric pouch, given an intramuscular injection of 25 c c of a 25 per cent decoction of spleen tissue the blood count recorded over long periods, and the units of gastric digestion

Deutsche medizinische Wochenschrift, Berlin

June 3 1920 **46** No 23

Exotic Diseases and Diagnostic Errors I I Muhlens —p 617
Case of Cystic Colitis E Keeser —p 619
Effect of Nutrient Medium on Weil Felix Reaction Michaelis —p 619
Case of Atypical Muscular Dystrophy A Bottner —p 620
*Conservative Treatment of Bone Cysts F Lotsch —p 620
Arc Lamp Phototherapy in Laryngeal Tuberculosis Blegvad —p 621
More about Spirochaeta Trimerodonta E Hoffmann —p 625
Aromatic Nitro Compounds as Abortifacients J R Spinner —p 626
Acute and Chronic Vagotonia L Teichenfeld —p 627
*Support of Perineum in Labor Pfleiderer —p 629
Dilated Pupil Following Barbital Poisoning J Fleischer —p 630
Intravital Microscopy of Eye with Gullstrand Nernst Lamp Koeppe —p 630
Rhinolaryngologic Hints for General Practitioner Finder —p 633

Healing of Solitary Bone Cyst—Lotsch reiterates that the bone should never be resected for a single focus of fibrous osteitis and reports a case in a girl of 10 in which roentgenograms taken every ten days showed bone tissue gradually filling up the cavity of the solitary cyst after curetting By the eleventh month not a trace of the cavity could be detected

Support of Perineum in Labor—Pfleiderer discusses his method of supporting the perineum to prevent laceration He commonly avoids antepartum irrigation of the vagina He avoids also in most cases putting his hand or even a finger into the vagina In case external palpation does not inform as to the presenting part, he palpates through the rectum Through the rectal wall he can distinguish the outlines of the head rump foot hand or umbilical cord Only very rarely does it become necessary to enter the vagina When the head begins to distend the vulva markedly, he places the patient on the right side requesting her to draw up the legs as much as possible He takes a position in front of the patient and lays his right hand on the head of the child in such a manner that the tips of the fingers of the outspread hand rest on the perineal border Then as the head of the child advances, he pushes the perineal margin ahead of his finger tips and over the head of the child, so that the distance from the anal opening to the edge of the perineum is not much greater than it was before the head began to protrude through the vulva Especial caution is required when the edge of the perineum reaches the chin of the child Here he checks a too rapid advance of the head By this method the number of perineal tears has been much reduced Even primiparae of advanced age are frequently brought through childbirth without injury to the perineum

Jahrbuch fur Kinderheilkunde, Berlin

1920 **91** No 6

*Anaphylactoid Purpura E Glanzmann —p 391
*Calcium Content of Blood Ida Handovsky —p 432
*Vascular Thrombosis in Young Children R Hamburger —p 439

Anaphylactoid Purpura—Glanzmann explains that the etiology of a pathologic predisposition to bleed is extremely complex In the purpura hemorrhagica group the composition of the blood itself is the main factor, in the anaphylactoid group chemical (toxic) influences acting on the capillaries are responsible, inducing stasis orthostatic purpura, and angioneurotoxic bleeding In a third group mechanical-dynamic factors are mainly involved, this includes the hemorrhagic phenomena in whooping cough and with thrombosis, etc The anaphylactoid hemorrhages on the other hand, have no connection with high blood pressure or local inflammatory processes This classification points the way to treatment, arsenic and transfusion of blood in the hemorrhagic purpura type and serotherapy in the anaphylactoid type

Calcium Content of the Blood in Connection with the Face Phenomenon—Handovsky reports that in twelve adults exhibiting the Chvostek sign and in nine free from it the calcium content of the blood was within the same range in all This conflicts with Stheeman s statement that the calcium content is low when this sign is positive

Thrombosis in Children—Hamburger analyzes twenty-six cases in young children of sinus thrombosis and three of thrombosis elsewhere The youngest child was 11 days old, and none were older than 4 months The somnolency and cerebral vomiting were not characteristic, but in a few cases there was stasis in the peripheral veins, with edema in face and head Symptomatic convulsions encephalitis, etc, reveal the bacterial infection of the brain, the cerebral localization of a general infection in which the sinus thrombosis develops so insidiously as to be usually a necropsy surprise

Monatsschrift fur Geb und Gynakologie, Berlin

April 1920 **51** No 4

*Signs of Abnormal Ovarian Functioning R Schröder—p 217
*Indications for Interrupting a Pregnancy R T von Jaschke—p 232
Status Hypoplasticus E Mathias—p 249
Carcinoma of Vagina with Genital Prolapse E Kleeman—p 252
Mental Condition of Parturients F Poensgen—p 256 Conc n

Clinical Signs of Abnormal Functioning of the Ovaries—Schroder says that constitutional factors may be responsible for excessive functioning of the ovaries, or the loss of inhibitory factors from other endocrine glands Chronic metroendometritis may develop as the consequence of long continued ovarian hyperfunc ioning but transient hyperfunction is usually a period of increased physical mental and sexual vigor Secondary insufficiency of the ovaries may be traced to pelvic disease, to excessive or deficient functioning of the thyroid suprarenals or pituitary, to cachexia of any kind, or acute and chronic intoxication of medicinal or parenteral nature from metabolic or nutritional disturbance, to anemias or chlorosis, to carbon dioxid intoxication from defective circulation, to nervous or mental derangement, possibly from abnormal distribution of the blood or to unknown causes, as from change of climate If all these can be excluded primary insufficiency of the ovaries may be assumed and proper treatment instituted Perverted ovarian functioning is manifested in irregular bleeding from the uterus from the persistence of ripe follicles without any corpus luteum stage With cystic degeneration of the ovaries the follicles do not ripen, but with this hemorrhagic metropathy the persistence of the follicles keeps the endometrium in a constant state of proliferation Another aromaly for which perverted ovarian secretion is known to be responsible is the persisting corpus luteum It may be so large as to simulate extrauterine pregnancy

Justified Indications for Interrupting a Pregnancy—Von Jaschke reviews the whole field of pathologic conditions in which the continuance of the pregnancy seems fraught with special dangers, his conclusion being that such conditions are few and infrequent In 385 cases in which others advised intervention he was able to escape it in 278 Only when cough, night sweats evening fever and progressive loss of weight continue in spite of sanatorium treatment does he regard abortion as indicated After the first three months he intervenes only if the lung process is mild or only recently flaring up, otherwise we cannot hope to influence the disease with any measures It the woman has several living children, or if there is laryngeal tuberculosis or this is the first pregnancy in far advanced tuberculosis he interrupts the pregnancy and sterilizes the woman With acute heart disease during a pregnancy he advises to empty the uterus by anterior colpohysterotomy under lumbar anesthesia after the acute manifestations have subsided With chronic heart or valvular disease, even symptoms of failing compensation do not justify it unless the heart was manifestly insufficient before the pregnancy In these cases and with albuminuric retinitis the woman should be under constant supervision in an institution while the question of intervention is being considered He has encountered only four cases in which uncontrollable vomiting compelled interruption of the pregnancy

Status Hypoplasticus—Mathias insists that this condition explains many otherwise mysterious instances of death from fright sports and under anesthetics One man of 20 died after three months of increasing weakness and subnormal temperature, blood pressure 60 or 70 mm Necropsy disclosed an extremely narrow aorta In a case reported in detail the woman of 23 died suddenly after spontaneous delivery, and necropsy showed marked hypoplasia of the blood vessels and suprarenals lymphatism and embryonal shape of the kidneys—thus a biologically substandard organism unable to stand the stress of childbirth plus a little chloroform

Munchener medizinische Wochenschrift, Munich

Jan 30 1920 **67** No 5

*Roentgen Ray Treatment of Cancer W Lobenhoffer—p 119
Serotherapy in Tuberculosis A Strubell—p 120
*Experience with Silver Arsphenamin E Galewsky—p 124
Pulmonary Tuberculosis During the War F Reiche—p 127
*Lymphogranulomatosis R Bierich—p 128
Lethargic Encephalitis F Groebbels—p 131
Roentgen Ray Outline of the Lungs H Assmann—p 134 Reply H Chaoul—p 134
Urology and the General Practitioner E Kraft—p 135

Feb 13 1920 **67** No 7

Increase of Mental Di ease in Spring and Summer Wilmanns—p 175
Changes of the Hilum Shadows in Heart Disease H Assmann—p 177
Roentgen Irradiation in Rectal Carcinoma H Chaoul—p 179
Irradiation of Cancers of Buccal Cavity H Tichy—p 181
Roentgen Radiometer Glocker and Reusch—p 181
Malaria in Bavaria F Eckstein—p 183
Mumps in Soldier Bardachzi and Barabas—p 185
Ethyl Chlorid Narco is Voll—p 185
Utilization of Surplus Human Milk Grumme—p 186
Urology for the General Practitioner Schlagintweit—p 186

Roentgen-Ray Treatment of Cancer—Lobenhoffer advocates postoperative irradiation of cancer but states that no detail of operative technic should be neglected with the idea that irradiation can be relied on to make up the deficiency, as such is not the case—it cannot always be relied on In inoperable carcinomas raying is a good adjuvant in the care of the patients as it may lessen their suffering and prolong their lives More than that we cannot expect at present Roentgen-ray treatment cannot as yet be considered specific for cancer and its application is neither so simple nor so harmless that it can be carried out without careful study of the indications and critical consideration of all the factors concerned He does not think that roentgenotherapy in cancer is sufficiently developed to be used by the general practitioner

Two Years' Experience with Silver Arsphenamin—Galewsky has used silver arsphenamin for more than two years and in that time he has given 2000 injections He considers silver arsphenamin sodium as the most efficacious of all arsphenamin remedies that have appeared so far With no other arsphenamin preparation has he had so few side reactions but the dosage must be carefully regulated, being gradually increased and also adapted to accord with idiosyncrasies He begins with a small dose 0 05 gm in the case of weakly women otherwise 0 1 gm and increases the dose every four or five days until he reaches the maximal dose 0 3 gm for men and 0.25 gm for women although ordinarily he does not give men more than 0 25 gm and women more than 0 2 gm as the maximal dose If these heavy doses are not well borne by the patients—if they are sensitive to arsphenamin—he gives smaller doses more frequently and increases the dosage very gradually He always waits for any untoward effects such as headache nausea dizziness vomiting, weakness etc, to subside before giving a new injection

Anaphylaxis in Lymphogranulomatosis.—Bierich discusses the pathogenesis and the differential diagnosis of lymphogranuloma The portal of entry has not as yet been demonstrated The essential biologic characteristics of the lymphogranuloma are that a granulation tissue presents at one and the same time different stages of specific inflammation while a tendency to retrogressive metamorphosis is noticeable Characteristic albumin decomposition products are present In uncomplicated cases (from 30 to 50 per cent) when this stage is reached local and general anaphylactic symptoms appear At a later stage either with or after development of the retrogressive phenomena connective tissue proliferation frequently with hyaline degeneration, takes place which leads finally to the induration of the granulation tissue The latter is not usually confined to the lymphadenoid tissue that was first attacked In the microscopic preparation it can be

seen breaking through the physiologic borders and sending its proliferative infiltrate into the neighboring regions In the manner of its local extension the lymphogranuloma closely resembles lymphosarcoma For the differential diagnosis the clinical symptoms must often be taken into account The proof has not yet been presented however of the hypothetic specific anaphylaxis-producing albumin catabolites in this disease

Therapeutische Halbmonatshefte, Berlin

March 1 1920 **34** No 5

Modern Treatment of Mental Diseases R Raecke —p 129 Conc'n Treatment of Flat Foot Wollenberg —p 134
*Vaccine Therapy in Furunculosis of Infants H Langer —p 138
Subcutaneous Injections of Quinin M Klotz —p 141
*Neo Arsphenamin Taken Mistakenly Internally M Friedmann —p 142

Vaccine Therapy in Furunculosis of Infants —Langer recommends vaccine therapy in the treatment of furunculosis in infants The injections are given daily from 500 to 1 000 million bacteria being employed He finds that the danger from secondary infection is less with intramuscular than with subcutaneous injections Two or three injections will usually bring about remarkable results It has been shown that the new-born infant lacks the power of forming specific antibodies Langer therefore, does not explain the favorable effect of vaccine therapy in infants on the basis of the formation of specific antibodies but is rather inclined to bring it under the head of nonspecific protein therapy Older children, who have developed more or less fully the power of forming antibodies require for this reason different treatment He uses a commercial vaccine

Neo-Arsphenamin Taken Mistakenly Internally —Friedmann reports a case in which the patient through a misunderstanding took internally 1 8 gm of neo-arsphenamin She found the powder almost tasteless, but difficult to take on account of the extremely strong odor She had taken every evening for six consecutive days 0 3 gm of neo-arsphenamin in a glass of water For ten minutes after the ingestion of the powder she had suffered from slight abdominal pain Three days after taking the first internal dose, diarrhea set in but at the end of the six days the stools were again normal The patient showed no objective pathologic symptoms the urine was free from albumin and sugar, the Abelin and the Marsh tests were negative The Wassermann reaction was still positive three days after the last of the six internal doses One peculiar feature was that the patient through the internal doses of neo-arsphenamin got entirely rid of the oxyurids with which she had been troubled for some time

Wiener klinische Wochenschrift, Vienna

Feb 5 1920 **33** No 6

Vertigo and Its Diagnostic Interpretation S Erben —p 119 Conc n in No 7 p 149
Mediastinal Emphysema S Wassermann —p 122
*Infections Following Manicuring H Körbl —p 127
Typhus Fever E Schweinburg —p 129
*Syphilitic Tracheo Esophageal Fistula M Kras nigg —p 130

June 3 1920 **33** No 23

Operative Treatment of Chronic Stenosis of Larynx and Trachea G Hofer —p 485 Cont d
Tuberculosis Infection Peyrer —p 488
Treatment of Meningitis with Staphylococcus Vaccines Two Cases One Fatal L Schonbauer and H Brunner —p 491
Complement Fixation Test in Spanish Influenza Engel —p 493
Hints on Roentgen Ray Diagnosis A Hen zelman —p 494

Infections Following Manicuring —Körbl reports thirty-two cases of infection of the fingers following manicuring In most of them the infection had led to severe inflammatory processes that required long treatment and caused more or less severe functional disturbances In several instances the infection even threatened the life of the patients The primary clinical picture was that of cutaneous panaritium In most of the cases the patients did not come for treatment until the primary stage had passed. Bacteriologic examination revealed in most cases mixed infection streptococci, however predominating Of the thirty-three patients only nine had manicured themselves In twenty-four cases the patients had secured the services of professional manicurists It seemed evident that the infection had been transmitted by instruments or ointments that had become infected In view of the foregoing facts, Korbl suggests that manicurists should be required by law to disinfect their instruments and by using an instrument, to avoid contamination of ointments, etc

Tracheo-Esophageal Fistula of Syphilitic Origin —Owing to its comparative rarity Krassnigg reports a fatal case of formation of a tracheo-esophageal fistula in a syphilitic He states that the vast majority of tracheo-esophageal fistulas are of carcinomatous origin, though a small portion are caused by ulceration from a foreign body in the esophagus A small number are tuberculous and congenital fistulas In Krassnigg's case the direct cause of death was bilateral inhalation pneumonia which had induced incipient gangrene of large portions of the right lung Artificial feeding through a stomach tube is strictly indicated in such cases, and the patient must be cautioned against laying aside the stomach tube even for once As for specific antisyphilitic treatment this may increase the size of the fistula instead of diminishing it Surgery does not promise much when the site of the fistula is so low down as was here the case The interposition of thyroid tissue has not gone beyond the stage of animal experimentation

Zentralblatt fur Gewerbehygiene, etc, Berlin

July 1920 **8**, No 7 Only medical articles listed

*Toxicity of Anilin Dyes Bachfeld —p 113 Cont d
*Toxic Action of Arseniuretted Hydrogen F Koelsch —p 121

Toxicity of the Anilin Dyes —Bachfeld's experience as physician to the large dye factory at Offenbach has not confirmed Weil's assertion in 1912 that 70 9 per cent of the 107 dyes he investigated are toxic to handle In six years, with an annual total of from 640 to 1,008 full time workers (300 days) only 32 developed skin disease, with a loss of 595 working days in all Of this group of 32 in only 7 was the skin disease traceable to handling the finished dye and in only 2 was this beyond question In these two instances the dye was black *schwefelfarbe* or *echtmarineblau* In handling the crude and the intermediate materials, 2 or 3 per cent of the full-time workers were affected, and of those engaged in direct production of the dyes, 3 or 4 per cent The article is to be continued

Industrial Poisoning with Arseniuretted Hydrogen —Koelsch adds eleven new cases to the 119 already on record in which AsH_3 generated in the course of the work caused severe destruction of the blood with a mortality of 27 7 per cent The cases occurred in chemical laboratories metal works balloons, and in making toy balloons, in Koelsch's cases during the manufacture of vanadium iron from ore containing vanadium (6 per cent) lead (30 per cent), copper (9 per cent), and arsenic (0 3 per cent), which was extracted with sulphuric acid This work had been going on for three years without mishap when, for some unexplained cause the dangerous gas was generated and all but two of the thirteen men were affected, and one died No special odor was noticed in the room

Of the five classes of hemolytic poisons, this is the only one likely to be encountered in the industries, and in the mild cases the symptoms suggest gastro-intestinal catarrh or catarrhal jaundice until the clear, dark red urine with quantities of albumin is noted The hematuria does not appear until after eight hours the jaundice not till the second day and the aspect may be more of a bronzing on account of the cyanosis There is no production of methemoglobin, in contrast to intoxication with the nitro bodies The blood shows destruction of from 75 to 80 per cent of the erythrocytes by the end of a week and the hemoglobin drops to 16 or 20 per cent Oxygen has to be supplied to tide the patient along and may have to be used for days and even weeks Given under pressure this saturates the remaining hemoglobin, and even the serum may absorb up to 2 per cent. To keep up the secretion of urine fluids should be supplied in abundance by the rectum with eventually venesection and infusion of Ringer's fluid or physiologic saline In prophylaxis ores as free from arsenic as possible should be used Some have sug-

gested keeping birds in the room, and a hydrarsenioscope has been devised which reveals the presence of the gas in the air by the yellow tint assumed by mercuric chlorid

Zentralblatt fur Gynakologie, Leipzig

May 8 1920 44 No 19

Ovulation and the Hormone Doctrine R Meyer—p 473
*Obstetric Compression of the Aorta H H Schmid—p 479
*Spontaneous Amputation of Left Adnexa B Schweitzer—p 487
Two Cases of Adenomyositis Uteri et Recti H Becker—p 490

Manual Compression of the Aorta in Third Stage of Labor—Schmid states that serious hemorrhages during the third stage of labor or postpartum of whatsoever origin, may be checked by the Momburg rubber tube or the Sehrt clamp but that in the absence of these devices manual compression of the aorta should be resorted to, which is a well known though somewhat neglected procedure Not only obstetricians but midwives also should familiarize themselves with this and use it when occasion demands The use of the Momburg rubber tube is associated with some danger as is shown by a number of injuries and a few deaths It is allowable only when the patient is in danger of bleeding to death

Unilateral Spontaneous Amputation of Adnexa—Schweitzer reports a case in which laparotomy revealed that spontaneous amputation of the left adnexa had occurred and the separated organs were receiving their blood supply through secondary adhesions On account of retraction of the omentum and stretching of the adhesions the adnexa had migrated to the middle of the abdominal cavity and had no connection with their original site

May 15 1920 44 No 20

The Sigwart Sign of Virulence of Streptococci H Neu—p 508
Pendulous Abdomen and Cesarean Section T Micholitsch—p 514
*Supravaginal Hysterectomy for Genital Prolapse K Tittel—p 517
*Spasm of the Nipple R Zimmermann—p 520
Rarity of Eclampsia on War Diet B Varó—p 522

Supravaginal Hysterectomy for Prolapse of Uterus.—Tittel's operation that he has used in seventeen cases has given entirely satisfactory results, namely the von Holst supravaginal amputation of the uterus suturing the stump to the abdominal wall He recommends this operation especially for total prolapse in elderly women

Spasm of the Nipple—Zimmermann describes a peculiar condition of the nipple in an otherwise healthy primipara When the child was 7 weeks old, he observed that a few minutes after it had nursed the nipple began to turn white At first a white spot the size of a pinhead could be seen in the center, it gradually spread over the whole nipple and resembled a Braun wheal induced on the skin The nipple felt hard At first the pain was confined to the nipple but later radiated to the whole mamma The phenomenon lasted from five to eight minutes and receded slowly A similar condition had been noted at times during pregnancy Therapeutic attempts proved unsuccessful

Arbeiten a d Anat. Institut. d. Univ Sendai, Japan

May 15 1920 No 4

Microscopic Anatomy of the Truncus Cerebri in Mammals G Fuse—pp 1 to 107 93 plates

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

May 8 1920 1 No 19

*Deviation of Complement in Tuberculosis J Hekman—p 1612
One Sided Diet and the Vitamins. D J Hulshoff Pol—p 1625
*The Sachs Georgi Reaction K. Dekenga and Plantenga—p 1631
Pathology of First Months of Life Cornelia de Lange—p 1633
Case of Hypernephroma of Kidney L J van der Mandele—p 1638

Deviation of Complement in Tuberculosis—Hekman found that all the human serums he examined laked sheep erythrocytes but that this laking property could be checked with tuberculous serum when an antigen, such as a 1 per cent solution of tuberculin was added to the serum He adds a little casein to absorb some of the hemolysins and reduce the tryptic power of the serum by diverting it away from the tuberculin It also serves to avert the nonspecific binding of the complement by the tuberculin The test gives a positive response in all cases of established tuberculosis, regardless of its location, the central nervous system excepted The prognosis depends on circumstances, an intense response showing large amounts of antibodies is a favorable sign but the extent of the lesions may be beyond recuperation From his observations in the course of this research and the experiences related by veterinarians and his theoretical reasoning he has become quite skeptical in regard to possible benefit from vaccine treatment of tuberculosis

The Sachs-Georgi Reaction in Syphilis—Dekenga and Plantenga report here the parallel findings with the Wassermann and Sachs Georgi tests as applied to their last 1 000 serums examined The last mentioned test becomes negative under treatment sooner than the former and the findings with the two tests were occasionally conflicting in different senses Hence the latter cannot be relied on alone but in combination with the Wassermann test it may prove instructive

May 15 1920 1, No 20

*Children Predisposed to Disease C J van der Loo—p 1689
Slight Virulence of Strain of Tubercle Bacilli L. K Wolff—p 1701
Secondary Suture in Surgery of Trauma H Rath—p 1707
Hallux Valgus H J Lycklama a Nijeholt—p 1711
*Epinephrin Arrests Abdominal Pains A G W van Waveren—p 1716

Physical Standards of Children—Van der Loo measures the side-to-side diameter of the chest as the child stands with arms stretched horizontally at the sides and the diameter through sternum and spine as the arms are extended forward The average difference between these two diameters gives the most instructive chest measure compared with the circumference of the chest the vital capacity, the weight and the height. The records from 330 children are compared, confirming that by such measurements it is possible to sift out the children who are peculiarly predisposed to tuberculosis and start them on the right track in time

Epinephrin in Treatment of Abdominal Pain—Van Waveren describes as a typical instance of the benefit occasionally to be derived from epinephrin the case of a woman whose abdominal pains persisted unmodified after appendicectomy He ordered 50 mg of dry suprarenal substance daily but this dose had to be reduced to 25 mg Under this the abdominal pains subsided and the stools became regular Then the dose was continued for two weeks on alternate days and clinically normal conditions were restored for a time Then the complaints began anew and again the symptoms yielded to the epinephrin as also at a third recurrence Three months have elapsed since the last recurrence and the abdominal conditions have been apparently normal since The patient is undoubtedly neuropathic, and epinephrin probably stimulates the ganglion cells to better functioning

Hospitalstidende, Copenhagen

May 26 1920 63, No 21

*Absorption of Visible and Ultra Red Rays by the Skin C. Sonne—p 321 Concld in No 23 p 353

June 2 1920 63 No 22

Papillomatous Tumors in the Thyroid Two Cases A Sennels—p 337

Absorption of Visible and Ultra-Red Rays by the Skin—This communication from the Finsen Light Institute seeks to explain the action of the general arc light baths by comparing effects of the light rays and of infra-red rays on the skin of the forearm Sonne announces as the result of his extensive research that the arm can bear without burning 3 11 calories per minute of the visible rays and only 1.79 per minute of the inner ultra-red rays and 1.33 per minute of the outer ultra-red rays None of the latter are reflected back from the surface while 35 per cent of the visible and of the inner ultra-red rays are turned back leaving only 2 02 calories to be absorbed Hence this figure represents the amount of the visible rays that can be absorbed without burning The temperature at the surface of the skin may therefore be 43 8 C under exposure to the visible rays but 45 5 C under the outer infra-red" rays With the latter the temperature decreases down to body temperature at a depth of 1 cm while with the visible rays the temperature increases with the depth to a certain point—about 0.5 cm—

where the temperature reaches 47.6 C. (117 F.). At this point, the temperature with the infra-red rays is only 41.7 C. In short, he declares in conclusion, with exposure of the skin to the light rays we are able to raise the temperature of the blood in and under the skin higher than can be realized with the strongest bearable dark heat rays. The difference may amount to as much as 5.8 degrees centigrade.

Hygiea, Stockholm

June 16, 1920, 82, No. 11

Typhoid Epidemic at Sundbyberg, 1919. O. Karlen.—p. 353
*Stability in Suspension of the Blood Corpuscles. K. G. Ploman.—p. 363

Stability in Suspension of the Blood Corpuscles.—Ploman examines the blood circulation in the retina during pressure on the eyeball, and records the length of the interval between the arrest of the arterial circulation in this way and the appearance of a tendency to agglutination. The findings parallel those obtained in vitro by Fahræus' method, as he describes. In the eighty-three persons examined, wide individual variations were found.

Norsk Magazin for Lægevidenskaben, Christiania

July 1920, 81, No. 7

*Serum Sickness and Anaphylaxis. A. Ustvedt.—p. 625
*Is Tuberculous Meningitis Curable? F. Harbitz.—p. 644
*Treatment of Acute Empyema. E. Platou.—p. 666

Is Serum Sickness Anaphylaxis?—Ustvedt presents arguments to the effect that serum sickness and anaphylactic shock are two different reactions.

Is Tuberculous Meningitis Possibly Curable?—Harbitz cites evidence from the literature that tuberculous meningitis can pass into a phase of fibrous transformation which results in the complete cure of the active disease. Rossle has reported a case of chronic tuberculous meningitis in a woman of 37 with final fatal coma after seventeen months, and Harbitz here describes a similar chronic case with a five and possibly eight months course in a man of 38 with necropsy findings showing mild tuberculous meningitis just entering a phase of anatomic healing. Another feature of the case was the spreading of the infectious process along the blood vessels into the brain and spinal cord, thus presenting the picture of diffuse tuberculous encephalitis and myelitis. In 60 per cent. of cases of tuberculous meningitis, the patients are infants, and in them it is invariably fatal. The instances of a chronic course and recovery are nearly all in adults the resisting powers or increased immunity aiding in the struggle against the infection. Epidemic cerebrospinal meningitis often entails hydrocephalus and changes in the brain, with mental disturbance. But tuberculous meningitis seems to escape this tendency. If the patient recovers he is not left with defects. Lumbar puncture and tuberculin treatment may contribute to the favorable outcome. In conclusion Harbitz cites a case from Overland's practice in which a girl of about 7 had long presented symptoms of tuberculous meningitis, but finally recovered and in time married and has borne two children.

Treatment of Empyema.—Platou reports a death rate of 17.1 per cent. in his 105 cases of acute empyema after influenza. He operated in ninety-nine cases, three of his patients dying without an operation and three recovering without one. The best results were realized with resection of ribs and valve drainage. This technic is simple and easy and should be applied in all cases in which the acute empyema is not frankly fetid. After the pus has been aspirated out he explores with a finger to remove fibrin deposits, and then drains with a retention catheter and valve tube. The dressings do not have to be changed for eight or ten days.

Svenska Lakaresallskapets Handlingar, Stockholm

March 31, 1920, 46, No. 1

Influenza and the Nervous System. H. Marcus.—p. 1
*Serotherapy of Complications of Gonorrhea. J. Reenstierna.—p. 39

Serotherapy of Complications of Gonorrhea.—Reenstierna enhances the effect of the antigonococcus serum by adding some substance that will induce fever, hoping thus to render the gonococci more susceptible as they are unable to bear a high temperature. To induce this "antibody fever" he used killed cultures of bacteria, for example, those of typhoid. He has applied this combined serotherapy in 100 cases of different complications of gonorrhea, especially arthritis, epididymitis and prostatitis, and the outcome has been extremely satisfactory, he says, in the majority of cases. Some very grave cases of gonococcus arthritis subsided completely in a week or two after one or two injections. In a very few cases no benefit was apparent and he thinks that secondary infection was probably responsible for this. Prostatitis was generally cured in a week, and in one case a large gonorrheal abscess in the perineal region healed after a single injection. His antiserum is prepared by intravenous immunization of goats with cultures of living gonococci. Various reports on this polyvalent serum have been published in the last four years, his research at the state bacteriologic laboratory dating from 1914.

Ugeskrift for Læger, Copenhagen

June 10, 1920, 82, No. 24

*Acute Digestive Disturbances in Infant. C. E. Bloch.—p. 745

Acute Digestive Disturbances in Young Infants.—Bloch lists four types: acute dyspepsia, the grave form, acute gastro enteritis, acute gastro-enteritis in the course of chronic dyspepsia, and the cases in which the diarrhea and vomiting are not due to any independent pathologic condition of the digestive tract but are merely a symptom of some pathologic condition in some other part of the body. The acute digestive disturbances represent merely the way in which the young infant reacts to any acute infection, regardless of its localization. Even overheating without infection or intoxication, may induce these symptoms in the digestive tract. Czerny calls this fourth group 'nutritional disturbances with parenteral infection' but Bloch thinks the term "symptomatic diarrhea" is more accurate as not only the cause and course are different but the treatment differs from that of actual nutritional disturbances. His mortality in the above four groups was zero in eighty-five cases of acute dyspepsia, 17 per cent. in the 310 cases of acute gastro-enteritis and 26 per cent. in the seventy-seven cases of acute gastro-enteritis in chronic dyspepsia. The mortality specified does not include the 4 and 7 per cent. that died within twenty-four hours of being admitted to the hospital. The grave form of acute gastro-enteritis is of infectious origin, mostly due to colon bacilli which are not pathogenic for older children, but in 10 per cent. of 217 cases paradysentery, typhoid or paratyphoid bacilli were isolated. The clinical picture was very much alike in all these. The main point in treatment is to supply water, especially by the mouth, but also saline subcutaneously. Weak tea instead of plain water may aid in stimulation. This restriction to water acts in acute gastro-enteritis regardless of its causal factors, but it should not be kept up for more than one, two or three days at most as inanition promotes acidosis. He warns that sugar and carbohydrates are liable to bring back the symptoms, and gruels are the worst food that can be given at these times. He feeds one part milk to two parts water boiled for two minutes in the Soxhlet apparatus. The effects have surpassed those of albumin milk, etc., in his experience. He continues this milk-water diet for not longer than a week at most, and emphasizes the importance of stimulants, stating that he makes extensive use of camphorated oil injections, digitalis preparations and caffein as indicated. Infants bear these stimulants well and they have often an unmistakably favorable action on the small pulse, subnormal temperature and other symptoms of impending collapse.

July 1, 1920, 82, No. 27

The Metabolism and Internal Secretions. N. R. Christoffersen.—p. 838. Concl. in No. 28, p. 879.
*Salivation and Hyperacidity. V. Andresen.—p. 850

Salivation and Hyperacidity.—Andresen suggests that possibly excessive acidity of the stomach might be reduced by reflex action from rinsing the mouth with an acid solution. This induces increased production of saliva and at the same time the saliva alkalescence is more than doubled in five minutes.

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TOTAL HYSTERECTOMY IN FIBROID TUMORS OF THE UTERUS

A PLEA FOR THIS PROCEDURE IN PAROUS WOMEN WHEN OPERATION IS NECESSARY *

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Is supracervical hysterectomy the operation of choice in treating those fibroid tumors of the uterus, in parous women, which require surgical intervention? This question is one which should be definitely settled in the interest of the patient for, owing to the ease with which the average supracervical hysterectomy can be done, the procedure has become routine with most surgeons and many gynecologists, who seldom consider the type of the operation to be selected by individual study of the character of the tumor, the condition of the cervix, and the age of the patient, and the subtotal procedure is therefore performed even in the presence of these cervical conditions which should demand total ablation of the uterus Hence the woman is frequently left with an infected, lacerated or hyperplastic cervix, which remains the seat of a focal infection Such a cervix, with its coexisting cervicitis and endocervicitis, tends to keep up from its infected glands a persistent and intractable leukorrheal discharge, and because of the extension of the infection through the lymphatic channels in the broad and uterosacral ligaments, the parametric tissues become thickened, sensitive and painful This explains the backache and pelvic pain so frequently complained of after the partial removal of the uterus

Furthermore, metrorrhagia is not an uncommon complaint when the retained cervix is lacerated, and the lips everted and eroded, from the overgrowth of the delicate intracervical lymphoid tissue This lymphoid tissue is easily irritated by vaginal contact, and bleeding results Hence in the subtotal extirpation, our follow-up work has shown that the lacerated or infected cervix remains as a constant menace to the woman's health, for not only does the retained infected cervix cause leukorrhea, metrorrhagia and backache, but this cervix with its lacerations, eversion and erosion paves the way for the occurrence of epithelial cancer in the retained stump

That this danger is real and not fanciful is proved by the fairly frequent occurrence of epithelioma in the conserved cervical stump

In reviewing the literature to establish the frequency of this occurrence, I have been struck by the relative infrequency of reported cases The paucity of these data is in direct contrast to the answers received from personal inquiry Altogether, in America, I have been able to collect 256 cases in which cancer has occurred in the cervical stump after subtotal hysterectomy for fibroid tumors This includes some of those cases already recorded by Leonard, but excludes all of those in which the cancer made its appearance within a year after the original operation, for it is fair to suppose that in these cases the disease was present at the time of the removal of the original tumor

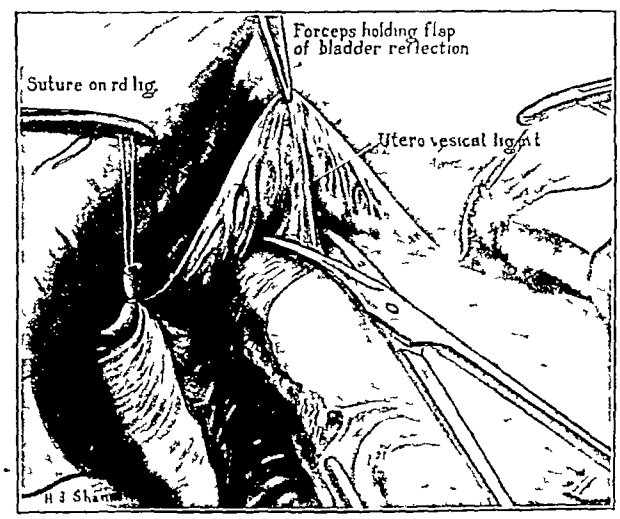

Fig 1 —Separation of bladder from cervix and upper vagina

Schottlaender, Spencer and Noble have shown by routine serial section of the uteri removed in more than 900 total hysterectomies that carcinoma of the cervix actually coexists in more than 2 per cent of all fibroid tumors of the uterus It is also significant to note that in these cases the malignant changes were undiagnosed at the time of the uterine extirpation, consequently, it is reasonable to suppose that there was nothing suspicious about the cervix except possibly lacerations at the time of operation And while it is admitted that a routine preliminary curettage and microscopic study of the scrapings might have shown cancer cells in all of these series, yet the fact remains that the occurrence of the new growth in the cervix in the reported cases, when a secondary operation has been done, as well as in those cases that were inoperable at the time the first saw the patients, has appeared at from five twenty-one years after

* Read before the Section on Obstetrics Gynecology and Abdominal Surgery at the Seventy First Annual Session of the American Medical Association New Orleans, April 1920

This fact must convince the thinking gynecologist that the parous cervix, with its traumatisms, eversions and erosions, is always problematic and has a potentiality which cannot be estimated by the absence

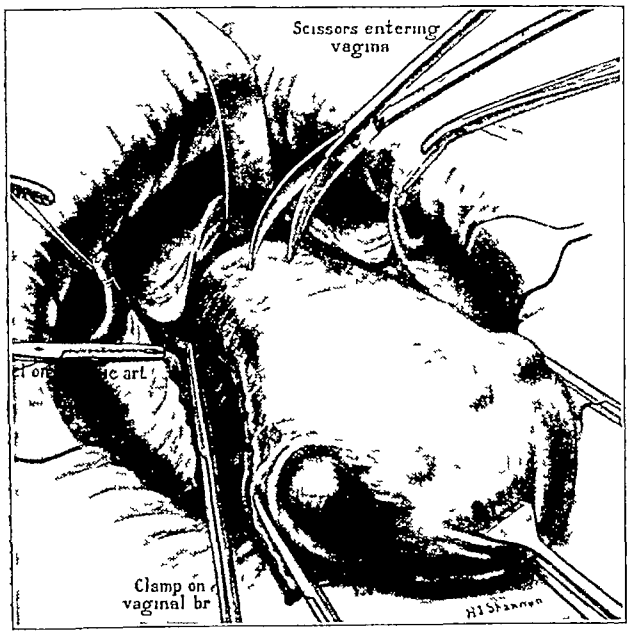

Fig 2—Bladder retracted incision being made into vagina with sharp pointed scissors

of cancer cells in the scrapings from an individual case at the time of the primary operation, and cannot be removed by cauterization or coning out of the cervical canal, for such treatment does not reach the most common point of origin in cervix cancer, i e, the vaginal portion

The advantages claimed for the subtotal operation are 1 The operation is more easily performed

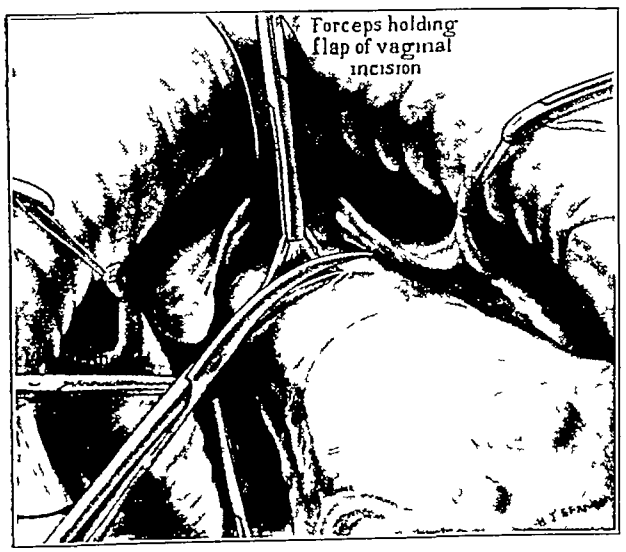

Fig 3—Separating cervix from vagina at cervicovaginal junction

2 It can be done more rapidly and with less loss of blood 3 It has a lower morbidity 4 It has a lower mortality 5 It does not shorten the vaginal walls 6 By retaining the cervical stump we leave the keystone of the arch, and thus maintain the conformity of the vaginal vault Therefore we are less likely to get prolapse of the vaginal walls

Are these contentions actually borne out by the experience of the trained gynecologic surgeon, and do they counterbalance the risks of leaving the cervix in the parous woman? To these questions we must answer in the negative, for only by following the end-results of these operations by a proper follow-up system as we have used for a number of years can we apply the acid test of the end-result to these contentions

Regarding the ease of performance and the time consumed in the operation, my personal experience is opposed to these claimed advantages, both of which are technical matters and depend largely on the training of the individual operator

My experience has been that the morbidity is lower in the total operation, while the mortality is 0 5 per cent higher in the complete extirpation (2 per cent) than in supracervical amputation (1 5 per cent)

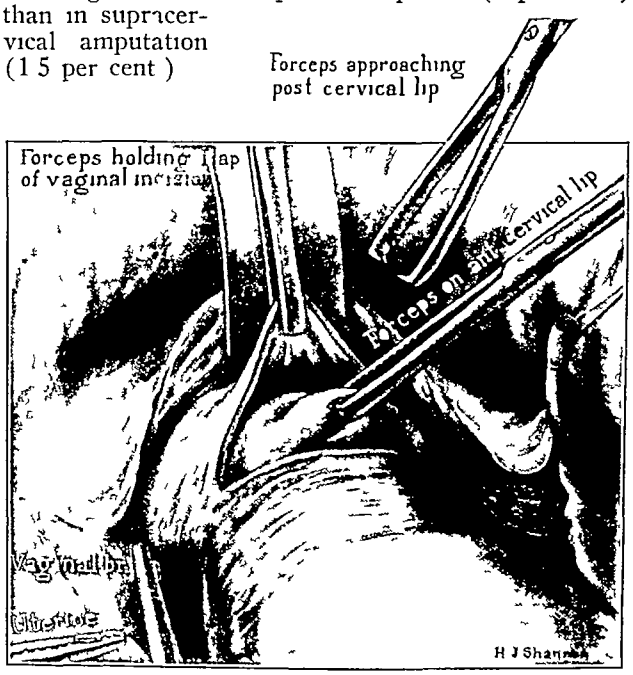

Fig 4—Cervix being everted through vaginal incision

Unless a wide cuff of vaginal wall is excised, the vagina is not materially shortened, and if the same care is taken to suture the round ligaments into the vaginal vault, and the cardinal ligaments are attached to the uterosacrals, as in the subtotal procedure, the vault of the vagina retains its high position

In observing the results from many clinics, we find that pelvic floor repair, even though it be necessary, is neglected by the average surgeon when he comes to take out the uterus, consequently, inversion of the vaginal walls is liable to happen in the subtotal, as well as in the total, unless due consideration is given to the matter of support from below and above For there is no reason to suppose that the cervical stump will remain high in the pelvis, unless it has its natural support from above and below, and this can be done just as well with the vaginal vault after the cervix has been removed, if the round, cardinal and uterosacral ligaments are attached in the vaginal stump, and the levators have been reunited, as when the cervix is left in place

It is incomplete gynecology that has brought about the criticism of the specialty by the general surgeon

Finished gynecology leaves a cured patient who does not seek the advice of other surgeons Again, in the parous woman I must repeat that it is always unsafe to leave the cervix, for cancer and the symptoms already referred to are actualities which any clinic with a follow-up system can demonstrate to the satisfaction of its clinical workers

The technic that we employ has been so planned as to obviate and overcome the criticisms of total removal and the claims for the incomplete operation, and the end-results have been so satisfactory that I have come to consider total hysterectomy as one of the curative measures that we can offer the woman with extensive fibroid disease

TECHNIC

The technic which we advocate is substantially as follows

After the patient has been catheterized and the vagina and cervix and cervical canal rendered sterile by thorough

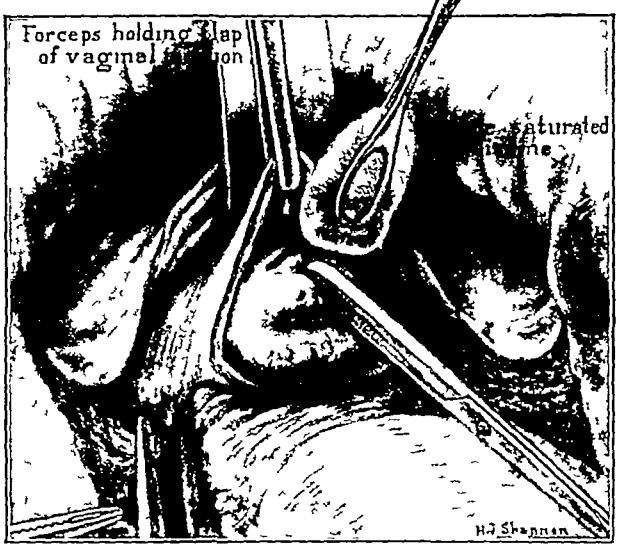

Fig 5—Iodizing cervix as it is dragged up with Jacobs forceps

iodization, the patient is anesthetized in the Trendelenburg posture, the Trendelenburg being gradually increased while the patient is going under the anesthetic This allows the intestinal coils to gravitate into the upper portion of the abdomen with each expiration The abdomen is then opened by a long abdominal incision to the right or to the left of the median line, extending from the pubis to the level of the umbilicus, or if the tumor is a large one, it may be carried to a considerable distance above this point The peritoneum is opened in the lower portion of the incision and two fingers are introduced into the lower angle of the wound and the edges of the abdominal incision are lifted up This as suggested by Guthrie, permits air to enter the peritoneal sac and further displaces the intestinal coils upward The wound edges are then protected by towels and the tumor exposed by proper retraction With a large pair of Jacobs forceps, the tumor is grasped and drawn out through the abdominal wound and eventrated as completely as possible This traction greatly facilitates the freeing of tubal, ovarian and intestinal adhesions, as it brings the field of operation directly into view After the tumor has been completely mobilized and it is drawn well over to one side to expose the infundibulopelvic and round ligaments, a clamp is placed close to the uterus including the tube utero ovarian ligament and the upper part of the uterine artery

The infundibulopelvic ligament is now tied distal to the ovary and cut free proximal to the ligature. The round ligament is now picked up and tied and cut on the uterine side of the ligature The tumor is then carried to the opposite side and the same procedure repeated Traction is now made on

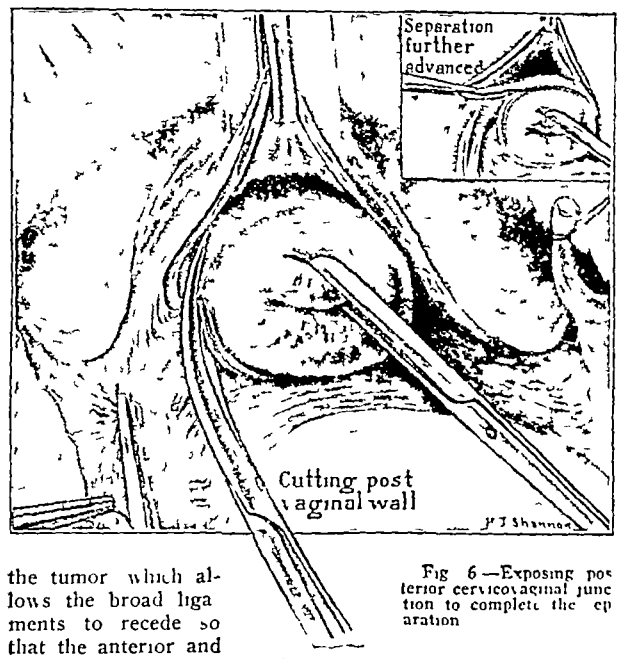

Fig 6—Exposing posterior cervicovaginal junction to complete the separation

the tumor which allows the broad ligaments to recede so that the anterior and posterior layers may be easily separated and the uterine artery exposed as it courses up the side of the uterus The anterior flap is now caught with a pair of mouse-trap forceps just anterior to the round ligament, and a pair of Mayo scissors passed beneath it across the front of the uterus As these are spread they separate the vesico-uterine fold from its uterine attachment and when it has been completely detached it is cut across from round ligament to round ligament

This permits us to separate completely the bladder from its uterine and vaginal attachments which naturally increases the mobilization of the uterus The tumor is now pulled forward over the pubis and the posterior fold of the peritoneum incised transversely just above the point of attachment of the

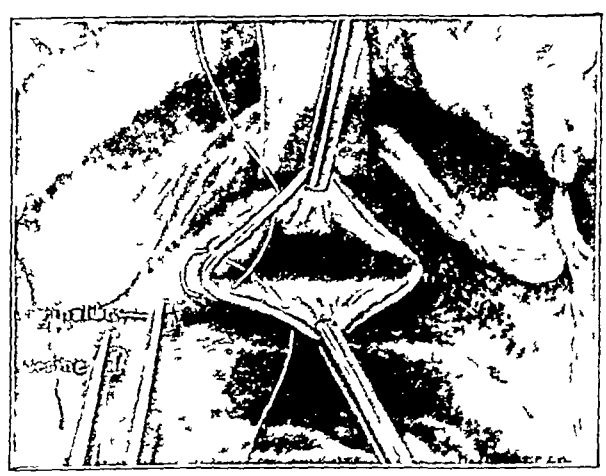

Fig 7—Closing vaginal tube with figure-of-eight suture

uterosacral ligaments and with a pair of Mayo scissors this flap of peritoneum is carefully separated from the posterior surface of the uterus This freely exposes the uterine arteries as they enter the uterus from the sides and by traction on the tumor the arteries are [illegible] the urete

naturally slip out of the way, thus the arteries can be grasped by a Kocher clamp with perfect safety and the uterus cut free proximal to the clamp

If the arteries have been properly isolated and the clamp has been applied at a point just distal to the origin of the vaginal branch, the remainder of the operation is practically bloodless

The bladder is then retracted with a Doederlein retractor and the vagina exposed just below the cervical junction With a long pair of sharp-pointed curved scissors the vagina is entered by a transverse incision just below its attachment to the cervix, and the anterior vaginal wall grasped in a pair of Jacob's forceps As the air enters the vagina it at once balloons it, and a pair of Jacob's forceps grasps the anterior lip of the cervix While upward traction is being made on the anterior lip of the cervix, the cervix and vaginal wall are again iodized and a strip of iodin-soaked gauze is passed from above downward through the wound We then continue the incision of the vaginal wall completely around the cervix at the cervicovaginal junction This is greatly facilitated by placing a Jacob's traction forceps on the posterior cervical lip and drawing it upward through the vaginal wound, as by this traction the cervicovaginal junction posteriorly is exposed

It may be necessary before cutting the uterus free to apply a Kocher clamp transversely so as to include the posterior vaginal wall and each uterosacral ligament This absolutely controls all of the hemorrhage from the cut edge of the vagina and allows us to free the uterus from its posterior attachments

The tumor and uterus having thus been removed, we next place a suture through the anterior and posterior vaginal walls, whipping these two surfaces together mucous surface to mucous surface This insures complete hemostasis of the vessels in the cut edges of the vaginal tube, and when tied gives a traction suture which is of considerable advantage in the subsequent steps of the operation

With the hemorrhage completely controlled, the tumor removed, and the vaginal vault closed, the round ligaments are now brought into and sutured into the vaginal vault While this is not considered by some surgeons as a necessary step, we find that when the ligaments are sewed into the vault relaxation of the vaginal walls is less likely to occur Furthermore, in this technic, we have taken care to preserve the uterosacral ligaments and they are also attached to and sutured into the vaginal vault, thus maintaining its high position in the pelvis

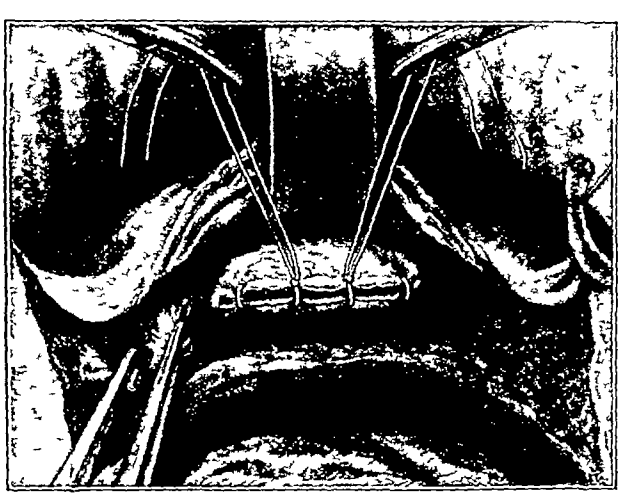

Fig 8.—Tied sutures acting as guys

The next and final step in the procedure is the peritonealization of all raw surfaces This is done by uniting the posterior fold of the broad ligament with the anterior, burying the stumps of the ovarian and uterine arteries and carrying the bladder reflexion of the peritoneum over the vaginal stump When the toilet is complete there should be no raw surfaces exposed, but a smooth peritoneal face extending from one pelvic wall to the other

CONCLUSION

When it is necessary to operate for fibroid tumor of the uterus in the parous woman or in those who have had trauma or infection of the cervix, total hysterectomy is the operation of choice

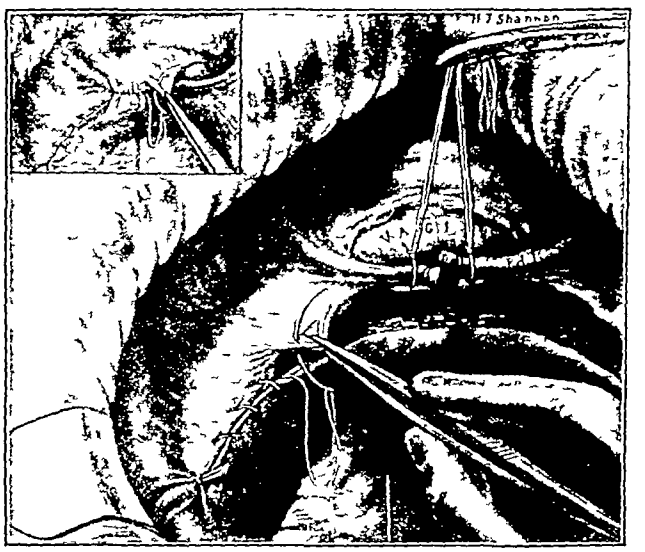

Fig 9.—Round ligaments sewed into stump completing the peritoneal toilet

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ABSTRACT OF DISCUSSION

DR EDWARD E MONTGOMERY, Philadelphia In the majority of cases of malignant disease the cervix is the seat of the disease because of its liability to injury during childbirth More or less disturbance from subsequent efforts at repair and its retention in hysterectomy renders this structure more prone to the development of malignant degeneration It is not always so easy to perform this operation as you may be led to believe from the diagrams the doctor has shown us The fibroid growths may be situated in the anterior, posterior or lateral wall, spreading out into the broad ligament, rendering it difficult to reach the cervix from any point Sometimes a preliminary reduction of the size of the mass by enucleation may be necessary In one case the growths were packed into the pelvis so that they had to be removed separately before complete extirpation of the uterus could be accomplished In many cases the approach to the cervix from in front will be the most expeditious procedure The ureters will be in less danger of injury When the tumor occupies the broad ligament of one side, it is better to enter the vagina opposite Traction on the cervix will permit the growth to be rolled out of the ligament without injury to a displaced ureter The plan presented for closing the vagina saves delay in healing The recommendation to remove the entire uterus should appeal to the careful operator

DR ALBERT GOLDSPOHN, Chicago I fully concur in Dr Polak's conclusions, but I am rather inclined to extend the indication beyond parous women It happens not infrequently that the retained cervical canal, even in the nullipara, remains the focus of considerable trouble I have observed endocervicitis in a number of such cases Some of these women had been treated rather unwisely by caustics which had caused stricture and sometimes occlusion of the cervical canal Such conditions then become very troublesome, and in the view of the profession nowadays as to focal infection, it seems to be dangerous even in that regard I myself have

seen two cases of cancer of the cervix that remained after some one else had removed the uterus The operation, as Dr Montgomery very prudently pointed out, is not quite as easy always as would be indicated by the operation designated by Dr Polak It is the procedure to which I have given preference, however, for about six years, and in view of the superior results, the difficulty in technic is not to be considered, except in cases where the added surgical risk should not be assumed

DR WILLIAM KOHLMANN, New Orleans I am glad that Dr Polak emphasized his preference for the total over the subtotal hysterectomy Many years ago I saw a case of carcinoma develop in the cervix after removal of the uterus It was difficult to remove the cervix There are two reasons, mainly, why I have always done a total hysterectomy First, if you leave a lacerated cervix it will cause disturbances, such as discharge and heaviness, symptoms which are observed in many cases, but not when both ovaries are removed This procedure is not however, advisable as a rule In case of removal of both ovaries, the cervix would shrink considerably in a short time The second cause is the danger of cancer of the cervix I have seen seven such cases in the last ten years I believe that radium, preferably would be indicated for primary treatment Regarding the operation, as Dr Polak suggests, I believe it can be followed more or less in every respect In my opinion, opening the vagina in front is the easier way to proceed He calls attention to the use of the round ligament, which I believe is very acceptable, although I do not make any special use of the ligament

DR. A C. SCOTT, Temple, Texas If I understand Dr Polak correctly, the primary reason for which he advocated total hysterectomy in preference to subtotal hysterectomy was that out of 900 fibroid cases investigated 2 per cent showed cancer Further, that 253 cancers have been found by others in the retained stump following subtotal operations It would be interesting to know how many thousand subtotal hysterectomies were performed in the series in which these 253 cancers of the cervix were observed A guess of 25,000 would not be unreasonable The occurrence of cervical stump cancer in 2 per cent of all fibroid uteri subjected to total hysterectomy in a series of 900 cases seems large, but I dare say that by reason of the higher mortality, more than 2 per cent could not have had the chance to develop cancer of the cervical stump had it remained On the other hand if all the cancers found in the series cited had occurred in the cervix after subtotal hysterectomy, which is not at all likely, most all the patients would have had still another chance for their lives Occasionally cancer of the cervix exists at the time that a subtotal hysterectomy is performed, but if the operator is careful in his examination, he is very apt to find definite evidence of a diseased cervix before operation I do not wish to be understood as advocating supravaginal hysterectomy in the presence of distinct disease of the cervix, but in the absence of apparent disease of the cervix, supravaginal hysterectomy should be given preference in all cases of fibroids of the uterus because the mortality is so low In my own series of more than 500 cases the mortality is a trifle over 1 per cent Operating with the patient in the combined position, the vaginal part of the cervix is so readily and satisfactorily examined while the pelvis is elevated and the abdomen open that [illegible] the cervix predisposing to cancer is not [illegible]

fibroid cases, we found that there was no difficulty in isolating them when it was necessary to do a Wertheim operation We practiced exposure of the ureter in every easy hysterectomy until we had perfected the technic. The report of twenty additional cases of cancer in the retained stump by those who discussed my paper, only goes to show that these cases are not so infrequent That makes 276 cases Dr Scott is right that there is a higher mortality in panhysterectomy, from 1.2 to 1.25 per cent, while the mortality in the subtotal operation is only 1 per cent In America it has not been the custom to have serial sections made of the entire uterus in these cases of fibroid tumor Hence, we have no positive way of knowing the incidence of cancer In the 900 cases I reported complete serial sections had been made. They showed an incidence of 2 per cent of undiagnosed cancer in the cervix In the 256 cases reported, the cancerous involvement of the retained cervix occurred in from five to twenty years after the original operation Consequently a preoperative curettage could not have saved these women If we are to save women from cervical cancer, we should repair or amputate the lacerated infected cervix

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GENTIAN VIOLET IN THE TREATMENT OF PURULENT ARTHRITIS

WITH A DISCUSSION OF ALLIED PROBLEMS

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In the treatment of purulent arthritis by lavage and staining interest first centered in the development of a satisfactory technic and the records of the early cases do little more than record improvement Three years ago the technical difficulties were overcome An apparatus was devised in every way satisfactory, and

Fig. 1 (Case 1) Purulent arthritis due to Staphylococcus aureus as result of treatment—normal flexion and extension

the cases treated since that time have been [illegible] that bacteriologic and other evidence [illegible] which to base an opinion [illegible] the merits [illegible] With the present report of these cases [illegible] discussion of some of the questions [illegible] laboratory studies Nothing new [illegible]

Staphylococcus aureus There were fever and tenderness, with marked limitation of motion

Treatment and Result—One lavage and staining resulted in prompt cure, there was limpid synovial fluid at second

Fig 2 (Case 2)—Purulent arthritis (Staphylococcus aureus) associated with compound comminuted fracture of patella final result

aspiration, which was sterile Knee motions were normal (Fig 1)

(*b*) CASE 2—*Purulent arthritis of the left knee, accompanying compound comminuted fracture of patella*—Thick bloody pus was withdrawn, which contained gram-positive cocci A pure culture of *Staphylococcus aureus* was obtained

Fig 3 (Case 3)—Pneumococcus purulent arthritis result of treatment—normal flexion and extension

There was the usual disability accompanying fractured patella, and the usual signs of purulent arthritis A large granulating incised wound of the soft parts just below the patella was present

Treatment and Result—After one lavage and staining the arthritis subsided and the fluid aspirated from the knee

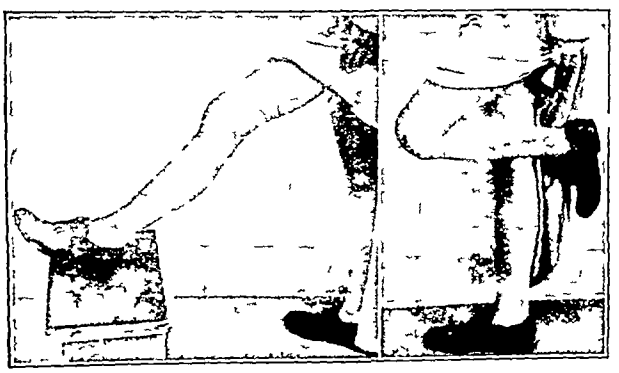


Fig 4 (Case 4)—Gonorrheal arthritis result of treatment—normal flexion and extension

became normal in character and sterile bacteriologically The granulating skin wound below the patella was allowed to heal, and the joint was opened It was normal in appearance and sterile bacteriologically The patellar fragments were approximated by suturing the prepatellar fascia

The result was cure of the arthritis, healing by first intention, and restoration of an absolutely normal knee (Fig 2)

2 PNEUMOCOCCUS ARTHRITIS

CASE 3—*Gonorrheal arthritis, with marked limitation of motion* (this was the picture and also the clinical diagnosis)—A Canadian soldier had received a penetrating pulmonary bullet wound some months previously, and the projectile was still in the lung, though causing no symptoms The golden serum aspirated contained diplococci, which, by mouse injections, were proved to be pneumococci The type was not determined

Treatment and Result—After one lavage and staining, the knee promptly returned to normal (Fig 3)

3 GONORRHEAL ARTHRITIS

Three of my early cases, not included in this report, were gonorrheal, and the results of treatment were

Fig 5 (Case 5)—Gonorrheal arthritis *a* condition on admission *b* and *c* condition on discharge

good but no more striking than in three of the four cases here reported Complete bacteriologic evidence in this type of arthritis is not always possible to obtain, owing to the difficulties of obtaining the organism In these cases the evidence obtained by examination of smears corroborated, so far as it went, the clinical proof that the arthritis had been cured Our inability to grow the gonococcus in a single case accounts for a regrettable, though unavoidable, gap in the evidence

It is true that the gonococcus is gram-negative and might be expected to be unaffected by gentian violet All my attempts to determine experimentally the effect of the dye on this organism have been defeated by its failure to grow at all, even on the most favorable medium, with any constancy[3] Whether the gonococ-

3 In a personal communication from a former pupil Dr C L Deming who at my suggestion has been working on this problem I am informed that he has succeeded in developing a technic by which constant growth of the gonococcus may be readily obtained

cus is gentian violet positive or gentian violet negative is therefore not at present known [4]

CASE 4—*Gonorrheal arthritis of the left knee*—The usual picture was presented, not particularly severe in type Golden yellow fluid with fibrin clots was obtained on aspiration There was marked limitation of motion The aspirated fluid contained gram-negative diplococci but the cultures were sterile

Treatment and Result—One lavage and staining were given, following which there was a prompt return of the knee to normal (Fig 4)

CASE 5—*Purulent arthritis of the left knee*—The clinical picture of a moderately severe gonorrheal synovitis was presented, though the attack was ushered in with a sore throat There was a golden yellow fluid containing fibrin clots at aspiration Intracellular gram-negative diplococci were found in the pus cells The cultures were sterile

Treatment and Result—After one lavage and staining, all clinical symptoms disappeared and the knee motions became normal A small amount of fluid, however, reaccumulated, this was aspirated, it contained no pus cells or organisms A second lavage and staining was done and on the reaccumulation of fluid, a third The patient was discharged well (Fig 5) I have recently seen her (about one year after treatment) and the knee is practically normal, there is slight tenderness at the lower border of the patella Motions are normal and there is no swelling She complains of pain in wet weather

Fig 6 (Case 6)—Gonorrheal arthritis final result

An arthritis, similar to that present in the left knee one year ago is now developing in the right knee, and she complains slightly of her left wrist and ankle

CASE 6—In this patient no bacteriologic evidence whatever could be obtained, but the clinical picture and the character of the fluid (golden yellow with fibrin clots) were those associated with gonorrheal arthritis The effusion was a large one but limitation in motion was only moderate

Treatment and Result—One lavage and staining were given Normal motions were restored and all clinical symptoms disappeared (Fig 6)

CONCLUSIONS AS TO THE EFFECT OF LAVAGE AND STAINING

The conclusion that pyogenic arthritis, due to *Staphylococcus aureus* or to pneumococcus, may be cured by this method is warranted by the facts It is also clear that normal mobility may thus be retained Whether the joint in this type of infection should ever be opened, unless the infection has become largely extra-articular, seems more than doubtful The evidence for these statements, while slender in quantity, is of such quality as to justify them Case 2 may be regarded as a crucial experiment in a human being Every control that could be desired was here present There was a granulating wound and a comminuted fracture of the patella The joint fluid on the admission of the patient was positive bacterio-

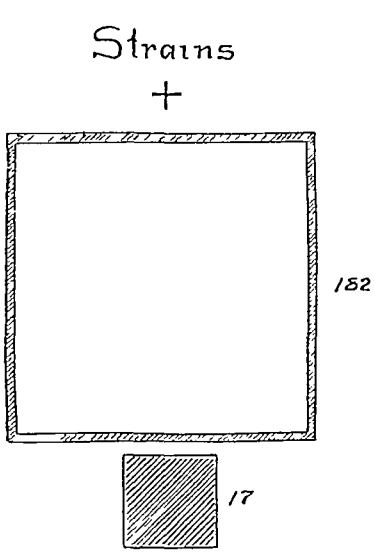


Fig 7—Schematic representation of effect of gentian violet on gram positive organisms study of 182 strains The central white square represents the number killed by the dye (165) the shaded border the number unaffected (17) The area of the shaded border is shown in the shaded square

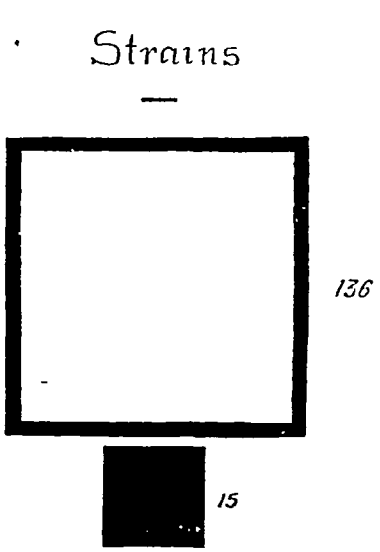


Fig 8—Schematic representation of the effect of gentian violet on gram negative organisms study of 136 strains The central white square represents the number unaffected by the dye (121) the black rim the number killed (15) It will be noted that the facts are just the reverse of those for the gram positive organisms The area of the black border is shown in the black square

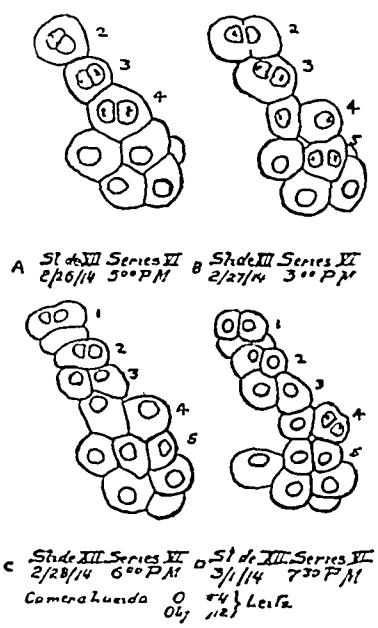
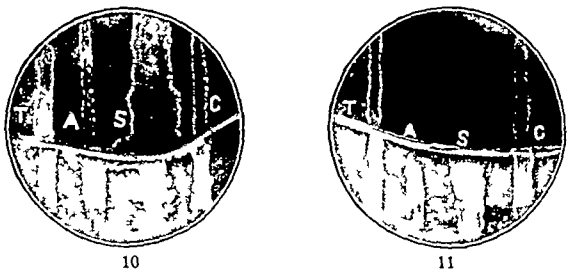


Fig 9—Diagrams made on four successive days of endothelial cells from the pericardium of an adult frog grown in plasma containing gentian violet 1 20 000 Cells and nuclei are stained and it will be seen that division of the stained cells and nuclei is observed from beginning to completion Figures 1 2 3 4 and 5 have been placed so that it is possible to follow the individual cells in the four diagrams

4 Simon's objection to the terms violet positive and violet negative is well founded as the selective property of the dye is in no way dependent on its color The terms were used in early publications purely for brevity's sake but it was there suggested that gentian positive and gentian negative are more accurate.

logically After lavage and staining, the joint fluid ceased to be purulent and became sterile, and clinical symptoms subsided Inspection of the joint surface at operation demonstrated a normal synovial membrane, and cultures from the joint were negative Healing of

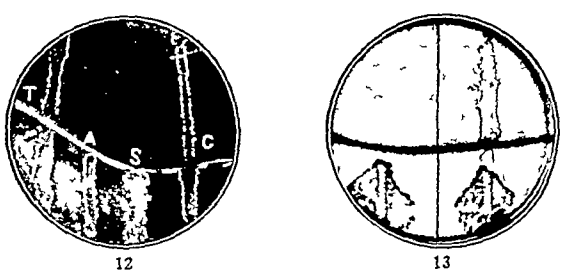


10 11

Fig 10—Gentian violet was injected into a rabbit's ear vein An hour and a quarter later blood was withdrawn from it and was used in making the upper half of this divided plate The selective power of the dye has disappeared (*T* B typhosus *S* B subtilis *A* M aureus *C* B coli the same lettering is used in Figures 11 12 14 and 15)

Fig 11—Upper half of the divided plate contains gentian violet and oxalated blood which have been allowed to stand mixed for one week Contact with the blood has not robbed the dye of its selective power

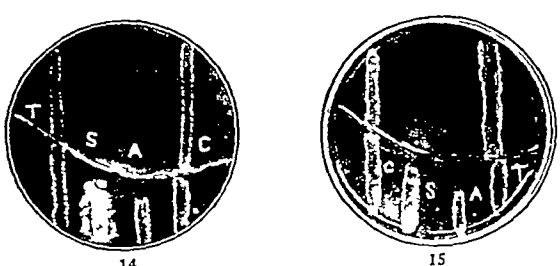
the sutured patella and of the skin occurred just as if bacteria had never been present, and normal knee motions were retained



12 13

Fig 12—Upper half of divided plate contains gentian violet and blood which has been oxidized by the addition of sodium phosphate and hydrogen peroxid Oxidation of the blood does not rob the gentian violet of its selective power

Fig 13—An illustration of the selective action of gentian violet on a mixture of gram positive and gram negative organisms A divided plate the upper half containing gentian violet agar and the lower half plain agar The left half of the plate has been stroked with a mixture of B subtilis and M aureus both gram positive The luxuriant growth in the plain agar ceases at a distance from the dividing line and there is no growth whatever in the gentian violet agar The right half of the plate has been stroked with the same mixture plus B typhosus (gram negative) At the point where the growth of B subtilis and M aureus ceases a pure culture of B typhosus is seen crossing the line and growing well in the gentian violet agar



14 15

Fig 14—The selective action of other triaminotriphenylmethane dyes is identical with that of gentian violet An experiment with ethyl violet is here illustrated

Fig 15—Experiment with rosolic acid the upper half of the plate contains rosolic acid agar the result is the same as with gentian violet

Concerning the gonorrheal cases, somewhat more cautious statements must be made And yet, making due allowance for the mild character of the cases treated (they were, of course, not selected cases), and for the fact that complete bacteriologic proof of cure could not always be obtained, the satisfactory clinical course warrants the belief that lavage and staining offer a method of controlling this disease Such bacteriologic evidence as it has been possible to obtain strengthens this conviction

STAINING OF ORGANISMS IN THE TISSUES

The clinical and bacteriologic studies make it seem likely that dye injected into a joint stains bacteria which lie in the depths of the synovial membrane Proof that this occurs is not at hand, though it has been sought experimentally A technic was recently described[5] by which it has been possible to demonstrate microscopically that the stain does reach the deep cells of the mucosa, and clinical evidence has been presented,[6] from a study of the effect of the dye on amputation stumps, to show that the bacteriostatic property of the dye, which persists in and about the cells, is of importance

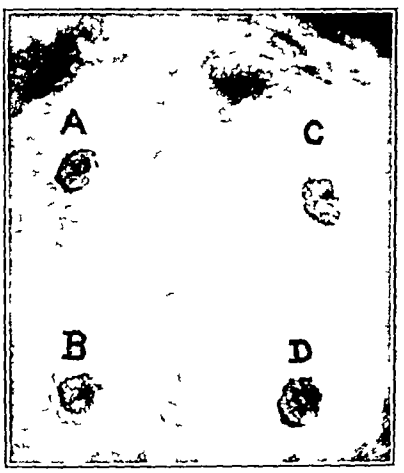


Fig 16—*A* and *B* are the controls *C* and *D* the vaccinations with stained virus the takes have been equally good

THE GRAM STAIN

The facts as to the parallelism between the Gram stain and the gentian violet reaction, revealed by a study of 318 bacterial strains, are represented in Figures 7 and 8.[6] Whether this parallelism is accidental or depends on some fundamental structural or chemical difference between the gram-negative and the gram-positive organisms is a problem susceptible of experimental solution, and the solution is now being sought[7]

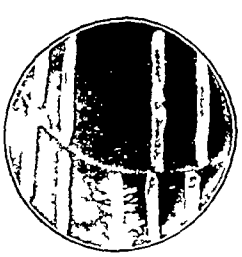


Fig 17—The selective action of gentian violet within a bacterial species the upper half of the plate contains agar to which the dye has been added the lower half plain agar The plate has been stroked with five strains of the gram negative B enteritidis four of these have followed the rule the fifth (at center) refuses to grow in the presence of the dye

THE EFFECT OF GENTIAN VIOLET ON TISSUE CELLS

It is possible to stain with gentian violet the living epithelium of the mucous membrane of the bladder, in experimental animals without doing any appreciable damage

5 Churchman J W Selective Bacteriostasis in the Treatment of Infections with Gentian Violet J A M A 74 145 (Jan 17) 1920

6 The original observations as to this parallelism have been amply confirmed by the work of others Crossley, in a paper read before the Dye Section of the American Chemical Society, found the parallelism complete not only for gentian violet but also in confirmation of my findings for other members of the triphenylmethane group (J Am Chem Soc 41 2083 [Dec] 1919) The technic he used was that described in 1912

7 Crossley in the article mentioned in Footnote 6 also calls attention to the fact that the effectiveness of the dye is governed by two factors the composition of the dye and the nature of the organism It is caused by the presence of reactive groups in the structure of the bacteria which are capable of readily combining with the dyes through certain reactive groups in their structure Crossley agrees with my statement that this variation in the susceptibility of bacteria to destructive chemical agents is of the greatest practical therapeutic importance.

to the tissue cells The absence of signs or symptoms of irritation in the human beings whose knee joints have been injected justifies the assumption that the process is equally harmless for synovial epithelium This assumption has received experimental confirmation from a study of the effect of the dye on protozoa (oxytricha and paramecia), and on living tissue growing in vitro The view is commonly held that the living nucleus cannot be stained My experiments justify the conclusion that gentian violet does actually penetrate the living cell and its living nucleus The division of stained cell and stained nucleus (Fig 9) cannot be interpreted as a survival phenomenon It proves that life proceeds uninterrupted in the stained cell [8]

FATE OF THE DYE IN THE ANIMAL BODY

Gentian violet injected into the circulation soon disappears from the blood stream (Fig 10) This change is not due to mere contact with blood, as can be demonstrated by repeating the experiment with oxalated blood which is kept in contact with the dye in vitro (Fig 11) Nor does the disappearance of the dye depend on blood oxidation, for if oxidation be produced by the addition of sodium phosphate and hydrogen peroxid, selective bacteriostasis is as sharply marked as when venous blood is used for the plates (Fig 12)

No such rapid transformation of the dye occurs when it has lodged in epithelial cells Yet even here it is not permanent, it is slowly changed and ultimately disappears A chemical substance which kills many bacteria of clinical importance, which does not injure tissue cells,[9] which persists for some time, but is finally disposed of, and which penetrates tissue, apparently possesses certain valuable properties not found in other bacteriostatic agents

APPLICATIONS OF SELECTIVE BACTERIOSTATIC PROPERTY OF GENTIAN VIOLET IN PRACTICAL BACTERIOLOGY

The possible application of the selective bacteriostatic property of gentian violet to the elimination of

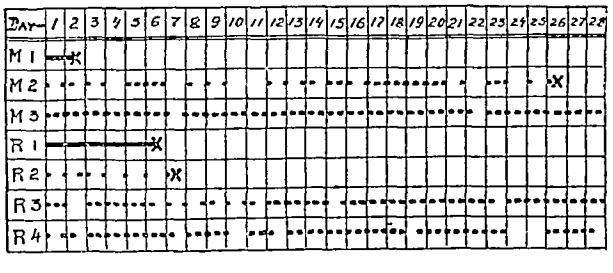


Fig 18 —The results of animal inoculation with stained B anthracis *M* mouse *R* rabbit The course of control animals is represented by a solid line the course of experimental animals by a dotted line X indicates that cultures at death from heart s blood and spleen were positive for B anthracis The survival of M3 and of R3 and R4 is important but the most interesting feature of the experiment is the death of M2 from anthrax twenty six days after the injection was made

gram-positive organisms in cultural work was suggested in early publications The original experiment indicated the kind of thing that might be done (Fig 13) The following applications of these observations have been made by others

(*a*) Petroff's method for cultivation of tubercle bacilli directly from sputum and feces [10]

(*b*) Elimination of spurious presumptive tests for *B coli* in water, by the use of gentian violet [11]

(*c*) Elimination of spurious presumptive tests in the examination of milk [12]

(*d*) Selective elimination of the hay bacillus from cultures of obligative anaerobes by the use of gentian violet [13]

(*e*) Experiments done during the epidemic of influenza to determine whether the dye might be of use in the isolation of *B influenzae* (not yet complete)

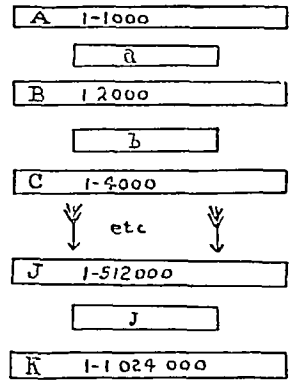


Fig 19 —Schematic representation of what probably occurs when stained organisms are injected into animals *A* first generation *a* first daughter cell *B* second generation at adult size *b* second daughter cell Generations intervening between *C* and *K* are omitted for brevity *K* eleventh generation By fission and growth the stain is reduced from 1 1 000 in *A* to 1 1 024 000 in *K*

SELECTIVE BACTERIOSTASIS AND CHEMICAL STRUCTURE OF THE DYE

It was early recognized that the selective property of gentian violet was also possessed by other dyes having a similar chemical structure (members, that is, of the triphenylmethane series) [14] Figure 14, for example illustrates a divided plate experiment with ethyl violet The result is the same as if gentian violet had been used A large number of experiments have also been made with substances that possess a simpler molecular formula than does gentian violet In Figure 15, for example, an experiment with rosolic acid is represented [15] The purpose of these experiments, and others of a chemical nature now under way, is to determine the portion of the triphenylmethane molecule responsible for the selective property [16]

EFFECT OF GENTIAN VIOLET ON TOXINS, ENZYMES AND ULTRAMICROSCOPIC INFECTIONS

The interest in the effect of a bacteriostatic agent, though centered in its action on bacteria, should not be confined to this field The effect of the dye on four

8 There is some evidence for thinking that anilin dyes may exert a selective influence on tissue growth (possibly stimulating epithelium and retarding connective tissue) similar to their selective influence on bacteria

9 This statement is not absolutely true There is probably no substance which is entirely without injurious effect if applied to cells in sufficient strength or repeatedly gentian violet is certainly irritating and probably destructive when used in great strength or continuously The statement is accurate for the dilutions of dye which have been used

10 Petroff S A J Exper M **21** 38 (Jan) 1915

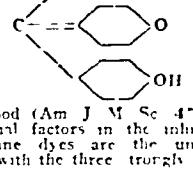
11 Hall and Elep on J Bacteriol **3** 329 (July) 1918, J Am Water Works Assn **6** (March) 1919

12 Hall and Elepson J Bacteriol **3** 355 (July) 1918

13 Hall I C Selective Elimination of Hay Bacillus from Cultures of Obligative Anaerobes J A M A **72** 274 (Jan 25) 1919

14 Churchman J W J Exper Med **17** 373 (April) 1913 Dahlia parafuchsin magenta pararosanilin rosanilin crystal violet and methyl violet were the substances studied all possessed the selective power The assumption was made that the power was inherent in all the triphenylmethanes Crossley inclines to the same belief and thinks that the selective action is related to the basic nitrogen He finds that an increase of the ethyl groups and a substitution of methyl radicals for aminohydrogen intensifies the bacterial action Gentian violet is a mixture of dextrin hexamethyl pararosanilin hydrochlorid penta methyl pararosanilin hydrochlorid and certain lower homologues particularly the tetramethyl compound It is not synonymous (as sometimes thought) with benzyl violet or with pyoktanin (methyl violet)

15 Rosolic acid is an oxyderivative of triphenylmethane and has the formula



16 Simon and Wood (Am J M Sc **[illegible]** and 544 1914) conclude that the essential factors in the inhibitory power of triaminotriphenylmethane dyes are the undetermined group in combination with the three strongly auxochromic amino groups

other groups of active agents has been studied (*a*) The unorganized ferments (ptyalin, pepsin, trypsin, rennin and thrombin) are unaffected by staining (*b*) The organized ferment (yeast cells) is killed by staining (*c*) The toxins of tetanus and diphtheria are unaffected, beyond a possible slight impairment of toxicity in the case of tetanus [17] (*d*) Of the ultramicroscopic infections, rabies and vaccinia [18] (Fig 16) are unaffected by the dye Experiments with the virus of poliomyelitis yielded conflicting results

SELECTIVE ACTION ON CLOSELY RELATED BACTERIAL STRAINS

The phenomenon of fastness, which accounts for the failure of certain bacterial and protozoan strains to yield to chemical agents capable of killing other strains of the same species, is well known Spirochetes occasionally occur, for example, which are fast to arsphenamin, and malarial parasites are encountered on which quinin has no effect [19] In a study of the action of gentian violet on the *B enteritidis* group, a unique instance of what might perhaps be termed reversed fastness was encountered The members of the *B enteritidis* group are gram-negative bacilli, closely allied to *B coli,* and would be expected to grow on the gentian violet half of divided plates and to survive staining with the dye In a study of five stains of this organism, one was encountered that acted toward gentian violet exactly as the gram-positive organisms do (Fig 17) This strain, first studied in Baltimore and later encountered in the collection of the Museum of Natural History in New York, constantly exhibited this reversal of fastness, which in both the Baltimore and New York samples had been retained through hundreds of transplantations, both being descendants of a strain originally isolated in 1900 by Dunham of Cambridge Throughout their careers, subsequent to the original transplantation, they had maintained this astonishing characteristic, though indistinguishable from the other four strains by every other known test, including reaction to the higher sugars

ANIMAL INOCULATIONS WITH STAINED ORGANISMS

In order to determine whether organisms stained with gentian violet were really killed or only injured so that they would not grow on ordinary mediums, the stained organisms were injected into animals A strain of blastomyces pathogenic for guinea-pigs, and a virulent *Staphylococcus aureus,* were used for this purpose In both instances the results were positive The control animals died, and the organism was readily isolated from them The animals receiving stained organisms survived When *B anthracis* was used different results were obtained Huge doses of bacteria were injected into mice The control animals all died within forty-eight hours In the animals receiving stained organisms life was prolonged, and occasionally the animal survived In the animals that did eventually die, death was brought about by anthrax For instance, Mouse 2 (Fig 18) was perfectly well for twenty-five days, on the twenty-sixth day it died, and the heart's blood and spleen swarmed with organisms The animal behaved as though it had received the injection more than three weeks after the injection had actually been made When the experiments were repeated in the less susceptible rabbit, survival of the animals was more frequent That the organisms were not really killed by staining is shown by the death of some of the experimental animals That they were so injured as to be nearly harmless is shown by the occasional survival of the susceptible mouse and the frequent survival of the less susceptible rabbit

What happened to the organisms in an animal like Mouse 2? They were not killed, for the animal eventually died of the disease, yet they remained impotent for a long period, finally flooding the capillaries in the normal manner of this organism Of the several explanations suggested for this phenomenon, the one that has been adopted as a working hypothesis is shown in Figure 19 It is assumed that by slow fission and growth the intensity of stain in the bacteria is gradually reduced, so that if we start with a dilution of 1 1,000 (Fig 19 *A*) by the time the eleventh generation is reached (Fig 19 *K*) the dilution has been reduced to 1 1,024,000 Here the stain loses its effect and development proceeds normally Is any machinery of protection developed during this period? Did Mouse 2 acquire a partial, Mouse 3 and Rabbits 3 and 4 a complete, immunity? These questions are now being investigated

Meanwhile it is important to recognize the fact that survival of animals that have received organisms subjected to the action of a "bactericidal" agent is no proof that the organisms have really been killed, and, on the other hand, to appreciate that a substance that does not actually kill organisms may still be an important antiseptic by reason of its bacteriostatic properties

15 East Tenth Street

17 Hall and Taber (J Infect Dis 15 566 1914) have followed this lead in an interesting attempt to devitalize toxic cultures of B tetani intended for immunization of horses

18 Vaccinia is placed in the group of ultramicroscopic infections purely for convenience

19 Examples of fastness among bacteria have been less frequently observed than among protozoa Morgenthal's production of drug fast pneumococci is one of the well known instances in the bacterial field

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EXPERIENCES WITH LUMINAL IN EPILEPSY *

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CHICAGO

Luminal is comparatively unknown in the treatment of epilepsy Introduced in this country shortly before the war its importation was stopped before the medical profession became thoroughly acquainted with its properties Thus it happened that the claims made for it by German writers in the medical journals of 1912 and 1913 have not been verified until quite recently

My attention was directed to the value of luminal in epilepsy by the casual reading of an article by A Hauptmann, published in 1912 in the *Munchener medizinische Wochenschrift,* and confirmed by others

Hauptmann selected for his tests cases of epilepsy which had been previously under supervision for several years, or in which an exact history was obtainable Most of these had received large doses of bro-

* Because of lack of space this article is abbreviated in THE JOURNAL The complete article appears in the Transactions of the Section and in the author's reprints

mids for long periods In reviewing his experience he says

Luminal tends to exert a favorable influence on epilepsy by reducing the number and severity of the attacks Its field of applicability will be chiefly in those very severe cases of epilepsy which can no longer be controlled by the largest doses of bromids In cases of medium intensity the attacks failed to occur under doses of 0 15 to 0 2 gm (2 to 3 grains) daily, while in the more intense 0 3 gm (5 grains) need not be exceeded No injurious by-effects of any kind have been observed after months of daily administration, and especially no cumulative action has developed Therefore, luminal can advantageously replace the bromids even in the milder cases where these appear contraindicated on account of by-effects

My clinical experience with luminal began toward the end of 1913 in the case of a clergyman's son, whose history is as follows

CASE 1.—A boy, 13 years old was first seen June 4, 1913 The family history is negative Father, a well-balanced clergyman, mother brothers and sisters are well and there is no epilepsy in the collateral branches of that family Born in normal labor, patient developed as other children, with diseases usual in childhood, but no serious illnesses Teething was unaccompanied by convulsions, but there were peculiar spells described by the mother as so called 'inward" convulsion and certain attacks which were undoubtedly those of 'minor epilepsy About thirteen months before coming under my observation a severe nocturnal convulsion occurred—the first major attack—and one month before my examination a similar attack occurred Meanwhile the minor attacks have become quite frequent—five to six daily In these the patient never falls but remains standing and appears dazed for a few seconds only Any slight indisposition such as a cold or indigestion, seems to cause an increase in the number of spells The examination revealed no sign or symptom of organic disease

An acne-like eruption covered the patient's face, due largely to the bromids administered for the attacks My treatment at first consisted in giving the well-known Bechterew mixture—sodium bromid 15 grains, Fowler's solution, 4 drops, in an infusion of adonis vernalis, three times daily Though there was improvement the severe and the light attacks did not entirely disappear and I decided to try luminal in daily doses of 1½ grains The effect was marvelous and almost instantaneous No more attacks were reported and the acne rapidly disappeared The boy progressed in his school studies There were no attacks of any kind during the following two years However, after some indiscretion in diet two slight attacks were noted, but none after that

Shortly after observing the effects of luminal in this case, I cautiously administered the drug in other cases, with similar results

In the discussion following Dercum's paper on Epilepsy with Special Reference to Treatment,[1] read before the Section on Nervous and Mental Diseases of the American Medical Association in 1916, I was the first in this country to express an opinion on the use of luminal in epilepsy Dr Ball, who participated in the same discussion, also emphasized the value of luminal in the treatment of the epileptic attack At that time my experiences was limited to few cases, but since then I had the opportunity of studying over 100 cases of "essential" epilepsy, which constitute the basis for this report

In order to avoid misunderstandings as to what may be expected from the use of luminal, we must be reminded that in spite of the numerous attempts at a rational, or causal, therapy of epilepsy, most of the methods hitherto proposed have proved fallacious, as has been so well shown by Russell G MacRoberts Our therapy is still limited to the prevention of the convulsion or, failing in this, we endeavor to render the attacks less frequent and less severe The convulsion being only a symptom, though the most conspicuous one, we are far from deluding ourselves into a belief that in causing the arrest of convulsions we have succeeded in curing the disease But the convulsion, or its equivalent being nevertheless the one symptom which stigmatizes the individual suffering from it as an epileptic, it is necessary to concentrate our efforts in the direction of ameliorating the epileptic's lot Though we cannot cure his *disease,* we endeavor to influence the *attacks* which make his life so burdensome

It would be wasting time were one to enumerate all the drugs which have been recommended for the treatment of epilepsy It will suffice to state that the bromids have held undisputed sway since their introduction by Laycock in 1857

Physical Properties of Luminal—Luminal, whose chemical name is phenobarbital or phenyl-ethyl-barbituric acid, occurs in tablets of 1½ grains and in the form of a white, odorless and slightly bitter powder It is almost insoluble in cold water, slightly soluble in hot water, soluble in alcohol, ether and chloroform, and in alkaline solution

There is also a soluble preparation of luminal, *luminal sodium,* which is phenobarbital sodium This preparation is principally used for hypodermic injection in the form of a 20 per cent solution prepared by dissolving the salt in boiled and cooled distilled water The dose of luminal sodium is 10 per cent greater than that of luminal

Actions and Uses—The drug was first recommended as a hypnotic and substitute for barbital (veronal), whose formula differs from the latter in the fact that one phenyl group displaces one ethyl group, and it is claimed that this change increases the hypnotic power of luminal (phenobarbital) over that of barbital The dose of luminal as a hypnotic is from 3 to 5 grains, increased if necessary to 12 grains

Method of Administration of Luminal in Epilepsy—I usually prescribe luminal in doses of 1½ grains, either in tablet or capsule, to be given at night before retiring The patient is instructed to report within a few days If the dose administered suffices to reduce the attacks or cause them to subside, it is given regularly in the same manner If this dose is found to be insufficient to cause a cessation of attacks, it must be increased to 2 grains, given at night Should this dose also prove too small, then another daily dose of luminal is added to the preceding one In that event my rule is to prescribe a small dose, say 1 grain, to be given in the morning while the larger dose is administered before retiring Only rarely have I been compelled to give three daily doses of luminal but one need not hesitate when it becomes necessary to increase the dose in order to get results For instance, in one case of severe epilepsy of many years the patient suffered from six to twelve convulsions daily, and nothing less than 3 grains three times daily caused any change in the patient's condition After several days or weeks, it will usually be possible to return to the smaller doses when the effects will be as favorable as with the initial larger doses When drowsiness and apathy appear, it is always time to reduce the dose My invariable rule is to give as little as is necessary to keep the patient

1 Dercum F X Epilepsy with Special Reference to Treatment J A M A 67 247 (July 22) 1916

free from attacks, and no more In cases that have been treated with bromids continuously for long periods of time it is advisable to begin the luminal treatment with somewhat larger doses at first, to be reduced later The treatment is continued for years systematically, any interruption is apt to be followed by a number of severe attacks—the same as with the bromid treatment

A point worthy of mention is the experience that even moderate doses of luminal seem to exert a favorable effect on the minor attacks, while the bromids are comparatively ineffective in these conditions

Contraindications—I know of no definite reasons why luminal should not replace the bromids in most cases of epilepsy requiring drug treatment

Regarding skin eruptions, I can report that among my number of treated cases (100) I have only seen two patients with rashes that necessitated a discontinuance of the luminal treatment

Urinary disturbances from luminal I have never seen, though continental writers speak of their occurrence and advise as a preventive measure to omit one day's treatment out of the seven

On the whole, I believe that there are not contraindications to the administration of luminal in kidney or cardiovascular conditions

To demonstrate more clearly the results of treatment with luminal on the attacks and general condition of epileptics, I have made the following abstracts from the records of several representative case histories

CASE 2—MISS M G, aged 23 with negative family and personal history, came under my observation March 2 1918 Though her health and development during infancy were of the average kind peculiar 'crying" spells without apparent cause are reported by the mother and also the circumstance that even slight illnesses were accompanied by physical upset and high temperatures Menstruation was regular and painless

At 18 while at college, the first "fainting spell' occurred, the second came one year later Then followed several similar attacks in periods varying from six months to one year apart The last attack, one month before consulting me, was attributed by the patient to "shock from dental work"

The first few attacks were accompanied by loss of consciousness, biting of tongue, frothing at mouth and the striking of head against objects encountered in falling Duration of attack five minutes, it is usually followed by severe headache and sometimes by sleep The earlier attacks were more severe than any of the later ones, during the last of which she experienced premonitory warnings in the nature of a 'receding feeling lasting long enough to enable her to lie down before the attack actually appeared In addition to the attacks described, there are present smaller ones consisting of peculiar sensations accompanied by dizziness and lasting only a second—evidently petit mal' attacks

I prescribed luminal in doses of 1½ grains, to be taken at night The results were satisfactory Though the patient has visited me monthly, there has been no record of a single attack since beginning the new treatment This means that not only have convulsions disappeared, but also the minor attacks

CASE 4—W X aged 24 with negative family and personal history, was first examined Sept 13 1914 The beginning of his trouble was while a cadet at a military academy then after a strenuous march he suffered from a so-called 'fainting spell" Within a half year five similar attacks appeared in rapid succession In all of these he became unconscious and keeled over, but consciousness quickly returned These were undoubtedly minor attacks of epilepsy His first major attack occurred two years before consulting me, the second one about a year after the first While the severe convulsions have been coming on an average once yearly, many minor attacks have been noticed in the interval

The administration of luminal in the usual doses (1½ grains nightly) was followed by happy results not one attack has appeared in two years in spite of additional duties imposed on the patient by the necessities of the war Only once or twice has patient suffered mild attacks while taking luminal—always, however, after disregarding essential hygienic rules

CASE 7—Mrs J D first seen, Feb 20 1916, is 54 years old has been married thirty-five years, and gave birth to three healthy children The first convulsion occurred only six months before consulting me, three months after the first came a series of convulsions The examination in this case pointed clearly toward a vascular cause for the epileptiform attacks

The administration of luminal in 1½ grain doses nightly failed to exert any appreciable effect on the attacks The dose was consequently increased to 2 grains There have been no attacks in two years

CASE 8—A Sister of Charity, 22 years old, was seen June 28, 1918 The first convulsion occurred when she was 4 years old Following this there was a long period of freedom from attacks until puberty Then "fainting spells" appeared, and a little later attacks of momentary "abstraction" The last kind of attack occurred very frequently Still later, regular convulsive attacks came to dominate the scene, at first only once or twice yearly but recently every seven to ten days

Luminal in doses of 1½ grains increased later to 2 grains, nightly, caused a disappearance of attacks during the past one and one-half years

CASE 10—H B a factory girl aged 23 under observation since Aug 27, 1918 had suffered from teething convulsions at 1½ years and subsequently was backward in school Two and a half years before visiting me she had her first nocturnal epileptic convulsion There also developed petit mal attacks, consisting of peculiar automatic movements of the fingers, blanching of the face, and momentary losses of consciousness

After the administration of luminal there were no attacks during a period of three weeks Patient considered herself cured and omitted taking the medicine for four days Then a series of attacks occurred, worse than any she had had before

This case seems to support the statement frequently made, that with cessation of treatment, the attacks recur even in greater severity than before taking luminal

In this connection it must be stated that several of my patients returned after having taken luminal for a short time believing themselves cured I always explain to such patients that there is great danger in discontinuing treatment abruptly and that I expect worse attacks than they ever had before if they omit the remedy Such a statement often has the desired effect

In other instances, patients fail to put in appearance and act as though they were cured, neglecting every sort of rule and leading a riotous life A series of convulsions usually brings them to their senses Then they visit the physician and promise to be good For a time rules are adhered to, the medicine is regularly taken, and the patient is again in fine spirits They often fall from grace more than once, before they finally learn their lesson

CASE 12—Mr H F B aged 34 was first seen Aug 30 1918 At 16 years his first convulsion occurred since which time convulsions appeared at irregular intervals There are both major and minor attacks The patient's general health and habits are good and there is no evidence of syphilis A relationship has been noticed between his habitual constipation and the frequency of epileptic attacks

The treatment consisted in regulating the bowels and the administration of luminal tablets in 1½ grain doses Up to the present time there has been no recurrence of attacks

excepting one minor attack For this reason the dose was increased to 1¾ grains of luminal nightly There have been no attacks since and the patient is able to attend to the business of a large banking house

Some of my cases have been free from attacks for a period of three to four years, others from one to two years, and still others, and these constitute the large majority of cases, for a number of months Owing to the scarcity of luminal during the war, I was often obliged to use sodium luminal, of which there was still a quantity left However, the dose is much larger and the effects do not equal those of luminal Fortunately, both products are now being manufactured in America

SUMMARY

Luminal in small doses, from 1½ to 2 grains, once or twice daily, has been found capable of causing an arrest of convulsions in epilepsy

Larger doses than those mentioned are seldom required, but may be safely given

Large doses may be administered when beginning treatment, especially after sudden withdrawal of the bromid treatment, even in such cases the dose may be gradually reduced to what constitutes an average dose, namely, 1½ to 2 grains

No harmful effects have thus far been observed from the long-continued administration of luminal

It does not appear to be a habit-forming drug

The effect on the mentality of patients taking luminal for epilepsy was surprising Patients receiving average doses of luminal do not show the peculiar mental torpor of those taking bromids

25 East Washington Street

ABSTRACT OF DISCUSSION

DR GEORGE A MOLEEN, Denver I can second what Dr Grinker has so well brought out with reference to the sedative power of luminal in epilepsy, and it seems to be more effective in the severer cases I cannot agree with Dr Grinker however, in that it is free from all danger particularly in the renal cases I think it participates in the danger common to all the series of barbituric acids especially in the more commonly used barbital (veronal) as well as luminal and the sodiums salts of these two radicals I have seen uremia precipitated in a case of renal insufficiency which resulted in death, and I am a bit chary about the use of any barbituric derivative in cases in which this complication is a possibility On the other hand, it replaces the bromids with less of the mental torpor that is commonly found with them and even is superior to the von Leube modification of the bromid treatment Even with the addition of the opiates to the bromids I think luminal has a more favorable effect in cases of epilepsy of long standing, but one must be very guarded about its use during convulsive seizures in general for they may possibly be of toxic origin and renal insufficiency may play a part

DR MARVIN L GRAVES Galveston Texas My own experience with luminal in the treatment of epilepsy is not quite so favorable as that of Dr Grinker Unfortunately we have no definite etiology on the pathologic classification of the epilepsies so that we might know just what we are dealing with and apply our therapeutics accordingly It appears to me that luminal will be found to be definitely an antispasmodic or anticonvulsive possessing a considerable degree of efficacy A certain number of epileptics that have been under my care have responded to from 3 to 4½ grains administered daily, the convulsive seizures ceasing, the mental symptoms becoming greatly improved and in all respects the patients appearing to be much better After the patient has taken the drug for a little while, however and then ceases taking it, it is not long before the convulsive seizures recur Moreover, I have seen cases in which luminal, administered in doses as high as 7 or 8 grains daily, has produced no cessation in the convulsions, which, as a rule occur nocturnally, but which are somewhat controlled by the bromids Luminal is a valuable drug in ½ to 1½ grain doses but it is not a curative drug in epilepsy, it is simply palliative, and perhaps, one of the best palliatives

DR ANDREW L SKOOG, Kansas City, Mo It is the general consensus of opinion on the part of students of this disease that epilepsy should be termed epilepsies rather than epilepsy There are many different causes for epilepsy, some we are able to discover, and others we are not These cases are classified as idiopathic or essential epilepsies My experience with luminal has been favorable in many cases I had used it for a short time only before the war, then after a certain period I was unable to obtain any of the drug I did use some luminal sodium but I did not get the same results with this drug that I had formerly obtained with luminal I have begun using luminal again and in one case of a severe type of epilepsy there has been complete cessation of the seizures From a review of the literature and personal experience with the drug I would say that it is worthy of serious consideration, especially in certain types of epilepsy However in view of reports on the toxicity of the drug, we should exercise considerable caution relative to the dosage and period of continuance I wonder whether Dr Grinker has had any cases in which he has discontinued the drug for many months or a year, with no recurrence of attacks In view of the fact that we favor the term epilepsies rather than epilepsy, the therapeutics of this group of diseases must be multiple In a certain number of cases surgical treatment is indicated Hygiene plays an important role particularly as regards diet I agree with Dr Grinker that bromids have been used in excess In Europe it has been the custom to administer considerably larger doses than we use I prefer sodium bromid The toxicity of a bromid may be lessened by certain laxatives particularly cascara and occasionally liquor potassii arsenitis

DR DAVID S BOOTH St Louis My experience with luminal has not been as favorable as I had expected, however the results obtained have probably been as good as those obtained by the use of bromids It is true that bromids have ill effects, but calcium or sodium bromid is the least injurious In those cases in which the bromids cause pustules, there is usually some focal infection

DR E BATES BLOCK, Atlanta Ga I have used luminal in more than sixty cases and my experience has been very favorable I do not give over 3 grains in each twenty-four hours, and that at bedtime It does not cure epilepsy but it has a controlling effect over epileptic convulsions Luminal has an advantage over barbital and chlorbutanol in that it does not have any effect left over the next day when it is given at night I have seen no ill effects from luminal The bromids tend to produce or light up or increase any preexisting inflammatory condition I would not give bromids in tuberculosis nor in any inflammatory condition

DR F B WYNN Indianapolis Generally speaking we continue the use of any remedy with the idea of diminishing the frequency of epileptic attacks I do not know of any drug which has been abused more than the bromids When I was connected with an institution we gave bromids ad infinitum but the longer I remained the less I gave whether for epilepsy or for excited and extreme cases of mental agitation The mental apathy, the developing transient stuporous state of the individual impairment of the digestive functions —all came in the wake of the use of bromids That is what we are apt to do with luminal It seems to me we are getting away from the fundamental principles in treating epilepsy We should keep the bowels free by dietetic and therapeutic measures We overlook the psychogenic factor Chronic epilepsy patients with dementia go for long periods without any epileptic attacks Psychology produces that remarkable result Patients with idiopathic epilepsy who have been treated by all known measures without [illegible] their attacks get well following a [illegible]

It is simply a matter of getting away from an old environment —a different psychology We should apply the principle in the management of cases of chronic epilepsy The physician in charge at our institution in Indiana says that there is a great deal in the psychogenic treatment of epilepsy Vary the patient's occupation and tell him that it will help him, and it will It is strange what a wonderful effect the change and inspired hope will have upon the course of the epileptic seizures

DR ROY M VAN WART, New Orleans About ten months ago I accidentally made the observation that barbital would control epileptiform attacks Experiments with barbital in small doses produced practically the same results as luminal I have treated about 200 patients Patients are usually given from ½ to 2 grains once daily In most cases it seems to act almost instantly It reduces the number of attacks very greatly

DR JULIUS GRINKER Chicago Dr Moleen spoke of convulsive seizures of toxic origin I do not include these among the so-called epilepsies I think there is only one kind of epilepsy, and that is, genuine or idiopathic epilepsy McRoberts wrote a very illuminating article on this subject, which deserves careful perusal Dr Graves objects to treatment with luminal because it does not cure I did not claim to have a cure for epilepsy, but was only offering a substitute for bromid, a drug which has always been used as a palliative When a patient has no more convulsions it does not mean that he is free from epilepsy The convulsive phenomenon is only one of several features which go to make up epilepsy As to whether any of my patients has not been given luminal for a year and remained free from attacks I have not dared take one off the drug for that length of time because of the fear that convulsions may return I have had cases in which the omission of treatment for only a short period caused a return of the attack Dr Booth stated that his results were not as favorable as mine His patients were drowsy It is a question of proper dosage Again in some isolated cases luminal will not take the place of the bromids Nobody has claimed that luminal will affect every case favorably Dr Booth also spoke of focal infection being present in some cases So-called epilepsy due to focal infection is not true epilepsy The bromids do tend to produce acne Some patients have a susceptibility to drug eruptions, and this we attempt to remedy by the addition of Fowler's solution With luminal, however, we do not need Fowler's solution Dr Wynn is opposed to the continuous use of any drug He offers objections to the use of bromids and if these are true, we should discard bromids altogether If he had any experience with luminal, he would not be able to mention any contraindication to its use, and certainly would be in favor of continuing the drug as long as it makes patients comfortable As regards cessation of convulsions because of a change to a new treatment, it is true that most of us have occasionally noticed this phenomenon A patient may say that he has taken bromids for three years but has given them up and now is free from attacks Then something happens and the attacks are worse than ever There are longer or shorter intervals between attacks not necessarily due to treatment Taking a patient off the bromids may precipitate an attack of serial epilepsy or he may be entirely free from attacks This is no argument against the use of luminal, for as a matter of fact, certain patients cannot take bromids, but do well under luminal

Barbital is toxic and habit-forming, and in the few cases in which I used it, the convulsions were uninfluenced whereas luminal has never proved toxic except in large doses and in a few susceptible individuals

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Is Your Community Fit?—Who is responsible for the health of your city? Have you a health officer? Does he give all his time to his office? Or are you depending on a busy doctor who accepts this position at a nominal salary for the honor he feels attached to it? It is well to bear in mind the truth of the motto Public health is purchasable in a large measure a community can limit the degree of prevalence of disease within its borders.—*Pub Health Rep*, April 25, 1919

THE VALUE OF POSTMORTEM WASSERMANN REACTIONS*

STUART GRAVES, M D
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LOUISVILLE, KY

For nearly six years the Wassermann test has been performed almost as a routine on the blood of subjects coming to necropsy in the pathologic laboratory of the University of Louisville Medical Department and of the Louisville City Hospital In the brief time allotted to this paper it is desired to summarize the findings in this study Statistics and details of the technic are purposely omitted, as these may be found in two previous articles based on parts of the same study[1] In brief it may be said that the clinical method as outlined by Kolmer has been followed

The only variation in technic has been that in the last few hundred tests cholesterinized alcoholic antigens alone have been used, but at least two antigens have been employed in each set and each antigen has been controlled with tubes containing double the dose of that particular antigen No result has been considered if the control containing double the dose of antigen has shown any anticomplementary tendency

No apology is made for the use of cholesterinized antigens Nearly a thousand tests were made with cholesterinized and crude alcoholic antigens side by side It was found that the crude alcoholic antigens missed many early and late lesions, and that the cholesterinized antigens did not give false reactions so far as could be ascertained from clinical data Moreover, the cholesterinized antigens have been found much more delicate in treated cases, and the best clinicians working in correlation with the laboratory have come to depend on the cholesterinized antigens Several reliable serologists have privately expressed the opinion to me that they believed the cholesterinized antigens were the most delicate and did not give false reactions if used properly and titrated frequently enough, but that they employed also a crude alcoholic antigen, because some clinicians mistrusted the other The cholesterinized antigens do tend to become anticomplementary more frequently and more suddenly than other antigens, and must be carefully controlled

The average clinician has no particular interest in a complement fixation test of blood after the patient is dead, but to the pathologist working in the postmortem room it affords a valuable check on gross pathologic diagnoses and frequently solves the postmortem problem, while in medicolegal cases it is of great value if reliable That it is not reliable was indicated in 1918 by Symmers, Darlington and Bittman,[2] who asserted that from 31 to 50 per cent of patients, who gave during life a negative Wassermann reaction, showed at necropsy positive evidence of syphilis, while the Wassermann reaction was positive during

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* Read before the Section on Pathology and Physiology at the Seventy First Annual Session of the American Medical Association New Orleans April 19-23 1920

1 Graves Stuart A Study of 290 Postmortem Wassermann Reactions J Immunol 3 53 (Dec) 1916 Postmortem Wassermann Reactions J A M A 70 1751 (June 8) 1918

2 Symmers Douglas Darlington C G and Bittman Helen The Value of the Wassermann Reaction as Indicated by Postmortem Investigation in Three Hundred and Thirty One Cases at Bellevue Hospital J A M A 70 279 (Feb 2) 1918

life in 30 per cent of the cases which did not show any evidence of syphilis after death In this view they agreed with some of the older German writers [3]

Larkin, Levy and Fordyce [4] answered the paper of Symmers and his co-workers somewhat emphatically, supporting the positive Wassermann reaction as the most constant finding in syphilis, and criticizing the Bellevue men on the grounds of questionable serologic technic and careless survey of pathologic material Certainly our findings in nearly 500 necropsies in which Wassermann tests have been made postmortem do not conform to those of Symmers, Darlington and Bittman, as shown by the accompanying table

RESULTS OF POSTMORTEM TESTS

	First Series	Second Series	Third Series	Total	Per Cent
Class 1 Wassermann tests positive with apparent syphilitic anatomic lesions or positive evidence of syphilis in histories	76	28	20	124	25
Class 2 Wassermann tests negative with no apparent syphilitic anatomic lesions and no evidence of syphilis in histories	161	39	39	239	48 5
Class 3 Anticomplementary specimens hemolyzed or otherwise unfit for use	8	14	27	49	9 9
Class 4 Wassermann tests negative with apparent syphilitic anatomic lesions or positive evidence of syphilis in histories	7	3	3	13	2 8
Class 5 Wassermann tests positive with no apparent syphilitic anatomic lesions and no positive evidence of syphilis in histories	38	26	3	67	13 8
Total	290	110	92	492	100

According to these figures, in 73 5 per cent of 492 cases the postmortem serology harmonized with anatomic findings or clinical histories, usually with both The serums were unfit in 9 9 per cent of cases, the incidence being nearly four times as much in the last series as in the first two This was during the war, when the laboratory was lacking in experienced helpers and was overwhelmed with work It is rare that serum is unfit when the blood is taken with a sterile pipet through a hole made by piercing the seared surface of the right auricle with the hot point of scissors, the blood being kept subsequently in an ice chest Right here it may be said that good results with the Wassermann test, before as well as after death, depend to a great extent on the technic followed in obtaining the serum, a point which clinicians frequently do not appreciate Kolmer has shown that a trace of acid or alkali as low as 1 10,000 affects the reaction sufficiently to give an incorrect reading

In this series positive reactions obtained six hours postmortem agreed with positives antemortem, negative reactions twenty-four hours postmortem similarly agreed

The apparent discrepancies in Classes 4 and 5 of the first two series have been discussed in previous papers In the last series these apparent discrepancies are found in only six cases, or 6 5 per cent

Three of the cases belonged to Class 4, with a negative postmortem Wassermann reaction, and positive anatomic findings

CASE 1 (A 18-22) —A patient with syphilitic sclerosis of the liver, with Wassermann reaction ++++ seventeen months before death was subjected to six months intensive treatment, the postmortem Wassermann reaction was negative

CASE 2 (A 19-1) —A white man, aged 55 of whom no Wassermann test had been previously made, died from aneurysm of the arch of the aorta the postmortem Wassermann reaction was negative

CASE 3 (A 20-7) —A white man aged 21, born syphilitic with a saddle nose and wizened face, who had lived for months with a tracheotomy tube died of starvation caused by stricture of the posterior pharynx

The other cases were in Class 5, with positive postmortem Wassermann reactions and no anatomic or clinical evidence of syphilis

CASE 4 (A 18-29) —A white boy aged 6 years died of generalized tuberculosis and tuberculous meningitis The postmortem Wasserman reaction was ++++ the spinal fluid Wassermann reaction had been negative one week before death The family history was incomplete

CASE 5 (A 19-9) —A white man aged 39 with an incomplete history and no previous Wassermann test, died of lobar pneumonia empyema and acute edema of the glottis The postmortem Wassermann reaction was +++

CASE 6 (A 19-23) —A white woman with no record of a Wassermann test died of generalized tuberculosis The postmortem Wassermann reaction was ++

Of these six, Case 1 is certainly not really contradictory Cases 2 and 3 were undoubtedly cases of late and congenital syphilis, in which antemortem Wassermann reactions are frequently negative In the first series all seven of the cases offering postmortem anatomic evidence of syphilis with negative postmortem Wassermann reactions showed aneurysms, but nearly thirty other cases of aneurysm found postmortem in this laboratory have had associated positive postmortem Wassermann reactions

Of the last three cases, it can only be said that there is no evidence that the patients were not syphilitic Certainly other comparisons indicate that reactions varying from ++ to ++++ mean syphilis without doubt Moreover, it is not remarkable to find 13 8 per cent of positive Wassermann reactions in cases not showing anatomic lesions of syphilis It must be appreciated that many cases with histories of syphilis and positive Wassermann reactions in life do not show anatomic evidence of the disease Moreover, in many of the cases coming to necropsy in this series, the accompanying history charts, while they did not offer evidence of syphilis, did not offer much of any other information, so that, while these cases must be put in this class under the circumstances, they would be put in Class 1 if the histories had been the result of searching investigation

Moreover, it must be appreciated that the lack of anatomic evidence of syphilis is the lack apparent on gross inspection and ordinary microscopic examination, such special search as has been made by Warthin at Ann Arbor would undoubtedly reveal *microscopic* changes characteristic of syphilis in many of these cases

Of the value of the Wassermann test during life there is, fortunately, no longer doubt in [illegible] ids

3 Frankel and Much Ueber die Wassermannsche Serodiagnostik der Syphilis Munchen med Wchnschr **55** 2479 1908 Pick and Prosauer Die Komplementbindung als Hilfsmittel der anatomischen Syphilisdiagnose Med Klinik **4** 539 1908 Krefting Deutsch med Wchnschr **36** 366 1919 De Besche Wassermanns Serodiagnose mit Leichenserum Berl klin Wchnschr **47** 1259 1910 Bruck Verhandl d deutsch dermat Gesellsch **10** 144 1908 Seligmann and Blume Berl klin Wchnschr **46** 1116 1909 Nauwerck and Weichert Munchen med Wchnschr **57** 2329 1910 Lubarsch Jahresb f arztl Fortbild 1911 No 1 pp 67 74 Lucksch Verhandl d deutsch path Gesellsch 1910 p 249 Gruber Munchen med Wchnschr **59** 1718 1912 Von Werdt Cor Bl f Schweiz Aerzte **41** 993 1911 Schmidt Die Wassermannsche Reaktion am Leichenserum Deutsch med Wchnschr **38** 802 1912 Reinhart Ueber die Wassermansche Reaktion Berl klin Wchnschr **49** 1730 1912 Lohlein Folia serolog **4** 227 1910

4 Larkin J J Levy I J and Fordyce J A The Value of the Wassermann Reaction A Reply J A M A **70** 1589 (June 1) 1918

most well informed men "In all the fluctuations of opinion as to the significance and value of this test one fact has remained clear, viz, that a strongly positive reaction means syphilis (barring leprosy and yaws)"[5] Therefore, if proof is offered that the postmortem Wassermann reaction corresponds to the antemortem reaction in the same cases, the main point is proved, namely, that the postmortem reaction is a reliable diagnostic sign of syphilis With this end in view, postmortem results have been checked against antemortem reactions In ninety cases so controlled, there are only eight differences In two, the degree of difference was + and ± These two can be practically disregarded In one, a ++++ reaction seventeen months before death was followed by six months' intensive treatment and a negative postmortem reaction This is hardly contradictory, especially as the negro had a typical syphilitic sclerosis of the liver In another, a male negro gave a history of syphilis seven years before death, had shown a negative reaction *three years and eight months later (probably after* treatment), and showed a +++ reaction after death with an ulcer scar on the penis In two other cases the postmortem reactions of +++ and ++++ respectively had been preceded by fairly recent negative reactions on the spinal fluid These are hardly contradictory, for the spinal fluid is frequently negative when the blood is positive One was in generalized tuberculosis in a white boy of 6 and the other in a case of cerebral hemorrhage in a male negro of 35 This leaves two flat discrepancies in ninety cases, an average of about 2 2 per cent If any series of tests extending over a period of six years show no more discrepancies, which might have been due to error on the part of the persons who took the serums, they can be considered fairly reliable

It seems strange that no more attention has been paid to the use and reliability of the postmortem Wassermann reaction In two recent medicolegal cases, it was the deciding point for the insurance companies No one else in this country has written on the subject, except Moody, Jackson and LeCount,[6] who concluded

> It would seem fair to state that under certain conditions the Wassermann reaction in the fluids collected after death is of value Where the blood or spinal fluids have remained in the dead bodies long enough for postmortem changes to occur in them, then the results cannot be relied on Finally in individuals dying from acute infections, the test is often positive in many instances independently of a syphilitic infection or its absence

With their conclusion that the test is often positive in persons dying from acute infections independently of a syphilitic infection or in its absence, the results in these series do not agree Nor is the fact that a positive reaction is found in cases of tuberculosis or carcinoma at all indicative that the positive reaction is due to these conditions In one case (A 20-20), in which a ++++ reaction was obtained after death from operation for epidermoid carcinoma of the tongue, there was found a typical syphilitic aortitis, there had been a ++++ reaction about two weeks before death Kellert[7] has reported a case of carcinoma, syphilis and tuberculosis coexistent in the same patient

In this connection the views of Moore[8] are of interest Basing his opinion on the study of syphilis from histologic, bacteriologic and clinical points of view, he believes that

> Postmortem appearances interpreted as being evidences of syphilis are the least valuable as proof and often actually misleading contrary to the view expressed by Symmers and Darlington
>
> Syphilis is an anatomic disease, but the postmortem anatomic changes are often better regarded as the results of a disease, of a process which has come to an end before the death of the individual, rather than as the disease itself hence the fallacy of correlating the results of a reaction which necessarily depends on the active disease process, with terminal fibroid changes
>
> The Wassermann reaction presupposes that there are certain substances in one or both of two body fluids, the presence of which is determinable by that procedure
>
> A patient may have syphilis, but if the so-called Wassermann bodies are not present in the blood serum or spinal fluid the result will be negative This may occur in cases of chancre before the end of the fourth week
>
> *A vastly different and more reliable picture is presented* by clinical syphilis than is presented by the postmortem appearance and it is the correlation of the Wasserman test with this evidence that determines its usefulness
>
> Clinical syphilis and the dark field microscope should establish the validity of the Wassermann test in known cases The Wassermann test should establish the presence of syphilis in unknown cases

It is in these unknown cases, which the pathologist frequently faces at the necropsy table, that the postmortem Wassermann test is of great value

In our laboratory more than 15,000 Wassermann tests have been done in hospital and clinic cases in which the clinical evidence could generally be correlated with the serologic evidence, and I am fully convinced, as was Rosenberger[9] in a study of 10,000 Wassermann reactions in the Philadelphia General Hospital, that the Wassermann test is the most delicate and reliable means of diagnosis of active syphilis I am as fully convinced that the postmortem reaction is just as reliable as the test during life, if the serum is properly taken and preserved

CONCLUSIONS

1 In ninety controlled cases there were flat discrepancies between antemortem and postmortem Wassermann reactions in only two

2 In 124 cases showing evidence of syphilis, postmortem or clinical, 137, or 90 5 per cent, gave a positive postmortem Wassermann reaction

3 The reliability of the Wassermann test depends to a considerable extent on the care used in obtaining and keeping the blood

4 Cholesterinized antigens are the most delicate and do not give false positive reactions if properly used and controlled

5 Observation of more than 15,000 reactions as correlated to clinical evidence substantiates the belief that the Wassermann test is the most delicate single test for syphilis

6 The postmortem Wassermann test is practically as reliable as the antemortem test if the serum is properly taken and shows nothing unusual in the serum control tube

100 West Chestnut Street

5 Pollitzer Sigmund General Prognosis of Syphilis in the Light of Recent Progress J A M A **74** 775 (March 20) 1920

6 Moody Jackson and Le Count Tr Chicago Path Soc **9** 129 1914

7 Kellert Ellis Carcinoma Syphilis and Tuberculosis Coexistent in the Same Patient J A M A **63** 1819 (Nov 21) 1914

8 Moore J A The Criteria of the Wassermann Reaction, correspondence J A M A **70** 643 (March 2) 1918

9 Rosenberger R C New York M J **108** 584 (May 11) 1918

ABSTRACT OF DISCUSSION

DR. A. M MOODY, Chicago Dr Leila Jackson and I made a series of tests a few years ago on postmortem fluids collected by Dr Le Count We ran one series at Presbyterian Hospital and another at St Luke's Hospital, and we checked everything very closely At that time, in 1912, there was not a satisfactory collection of fluid in many instances Proper precautions were not always taken in regard to the containers That would account for a large number of anti-complementary reactions which we got at that time Then we made Wassermann tests in every case, many of the fluids were in such a state of decomposition that no valuable result could be obtained Our conclusions at that time were that when a positive reaction is present it is a valuable sign of syphilis, that is in the presence of the lesions of syphilis If other diseases are present which may interfere with the reaction in some way, a positive reaction will not mean syphilis, but in cases of sudden death from a disease other than acute infections it gives valuable information, and especially is that true of the aortic lesions of ordinary syphilis I think Dr Graves has come to the same conclusion We believed at that time that persons dying from pneumonia and other contagious infections did not give reliable Wassermann reactions in their postmortem fluids We examined other fluids besides the spinal fluid, but they all bore out the statement Dr Graves made, except that we found that the Wassermann test was not positive in the case of patients who died of acute infection From a medico-legal standpoint, a positive Wassermann reaction in a patient dying from syphilis should be just as valuable as one made on the living subject

DR WARD BURDICK, Denver It is a matter of great importance that we establish the value of the postmortem Wassermann test Having been coroner's physician of Denver for a number of years, I can recall several instances in which the result of such a test could have been used as evidence, but by reason of there being so little in the literature with reference to its value it had no legal status Have you had difficulty in securing these serums hemoglobin free? What is your technic for securing the specimens of blood?

DR. R G OWEN, Detroit One of the important factors is the question of cholesterinized antigens We realize that the Wassermann reaction is not 100 per cent. accurate and we must make up our minds whether we are going to get false positive or false negative reactions in certain cases You do get a certain percentage of false positive reactions with cholesterinized antigens We recently completed a series of examinations of 2,241 specimens, which were run with cholesterinized antigen, one hour incubation and with plain alcoholic heart extracts with four and fifteen hour fixation in the icebox Five hundred and seventy-one tests were positive with all three methods, 1,558 were negative throughout One hundred and twelve gave different results with the three methods One and one-half per cent were positive only with the cholesterinized antigen, but these were all in old, treated cases, some patients having gone as long as fifteen to twenty years without any definite symptoms There were however, about 3 or 4 per cent of what we considered false positive reactions given by the cholesterinized antigen In these cases, the history and physical findings were carefully reviewed and no evidence of syphilis could be elicited To make a diagnosis of syphilis with a cholesterinized antigen alone is dangerous

DR. F F RUSSELL, Washington, D C In the last hospital where I was stationed we made it a rule to do postmortem Wassermanns We did from twenty-five to thirty postmortems a month, and we came to have a great deal of confidence in the postmortem results, where the body was fresh enough to get a good serum. Dr Graves said that he did not get a positive Wassermann in an acute infectious disease I can confirm that statement. We might get a slight reaction, but nothing that was confusing There never were any strong reactions obtained in yaws or leprosy or malaria unless the patient had syphilis also I do not think that we realize what a common complication syphilis is in leprosy In the leper asylum at Ancon C Z we had between 40 and 50 per cent of syphilitics Naturally, we got a very high percentage of positive Wassermanns in our leprosy cases As time went on, and these patients lived for years, the clinical signs of syphilis became evident To illustrate by one case A man was admitted to the hospital with typhoid fever During the course of the disease he was found to be a leper in the earliest stage of the disease Before he convalesced from the typhoid he developed a primary lesion of syphilis and also a pulmonary lesion His pulmonary lesion did not clear up and it became evident after a time, that he was suffering from acute pulmonary tuberculosis During his typhoid his tuberculosis and his leprosy he had a positive Wassermann, all because he also had syphilis

DR JOHN A KOLMER Philadelphia Did you get a positive Wassermann in your case?

DR RUSSELL We got a weak positive reaction

DR KOLMER A case of yaws in Philadelphia diagnosed by Dr Schamberg gave a positive Wassermann reaction So far as my own experience is concerned, there are only two diseases other than syphilis which may consistently yield positive Wassermann reactions, namely, leprosy and yaws

DR. WARD BURDICK Denver The statement has been made, has found its way into the literature and has become more or less firmly fixed in the minds of many physicians that some tuberculous patients give a positive Wassermann reaction when syphilis is not present I have never found this to be the case

DR KOLMER I can confirm what Dr Burdick said A patient with tuberculosis gives a negative Wassermann even with cholesterolized extracts unless he is likewise syphilitic

DR F M JOHNS, New Orleans I have had occasion to make many Wassermann tests even using cholesterinized antigen on active malaria patients Dr Bass and I took many specimens of blood from very heavily infected patients and series of Wassermanns were made with cholesterinized antigens alcoholic antigens and others of a tentative specific nature for malaria We frequently found a 4 plus Wassermann with a cholesterin fortified antigen and very slight fixation with the alcoholic antigens only These same patients would give a negative Wassermann with cholesterin antigen on the abatement of active symptoms

DR STUART GRAVES, Louisville Ky Frequently in postmortem examinations we make a routine blood culture even in patients who have been dead from twelve to forty eight hours Postmortem Wassermanns are of value if the serum is collected under proper precautions and if the tests are properly controlled They are often of far more value than the routine blood culture The routine Wassermann should be done at each postmortem provided the body is not too old I think we found positive postmortem Wassermanns agreeing with antemortem Wassermanns as late as twelve hours and negative postmortem Wassermanns agreeing with negative antemortem reactions as late as twenty-four hours Often in acute infections we found the serum considerably tinged with hemoglobin In taking the serum the right auricle is seared thoroughly with a hot iron and punctured with an old hot scissors blade Then with a sterile pipet the serum is sucked up and deposited in a sterile tube If the blood appears hemolyzed, or if the controls are not perfect, that serum is thrown out In relation to the cholesterinized antigen it all depends on what is considered a positive reaction We have come to depend on no reaction as diagnostic if it is not more than plus With each antigen carefully titrated and controlled with a double dose of that antigen, a result of 2 plus 3 plus or 4 plus is diagnostic of syphilis but one plus we do not interpret as positively diagnostic, although we consider it as being suspicious It is generally recognized that a Wassermann test properly done is the most reliable means of diagnosing syphilis In checking up the postmortem reactions by antemortem reactions the positive postmortem reactions corresponded almost exactly to the antemortem reactions in about 97 per cent of the cases If in a large series uniform reactions are obtained by two laboratories or by corresponding tests it is pretty reliable.

MILD CHRONIC NEPHRITIS IN CHILDREN *

LEWIS WEBB HILL, M D
BOSTON

Acute nephritis in children is often a very long drawn out affair, a case probably should not be called chronic until albuminuria has persisted at least a year The classification of chronic nephritis, whether it be in the child or in the adult, has always offered considerable difficulty The variations in the clinical picture which may be presented are many, depending on the amount and kind of damage that has been done, and the stage of the disease in which the patient may be at the time The older pathologic classification has not been satisfactory for practical purposes, is gradually being done away with, and is being replaced by a simple clinical classification In children the situation is somewhat different from that in the adult as we do not ordinarily have to take the general wearing out process of the organism into consideration, we are dealing with kidneys that have been suddenly damaged when healthy instead of with kidneys that may have gradually suffered injury due to the wear and tear of life over a long period of time Also, in adults with chronic nephritis the picture is usually complicated by concomitant cardiac and vessel damage, in children this factor does not ordinarily have to be considered

It is best, I believe, in accordance with the teachings of the internists, notably those of Dr Henry Christian, to follow a simple clinical classification in considering chronic nephritis in children—the simpler the better For practical purposes we may divide cases of chronic nephritis in children into two broad groups (1) "ordinary" chronic nephritis, further subdivided into the mild and the severe cases, and (2) chronic nephritis with infantilism, or "chronic interstitial nephritis," as it is more often called—an excessively rare condition in children

The severe "ordinary" cases and the rare "interstitial" cases are represented by somewhat similar pictures in the adult, the mild forms which I wish especially to discuss are seldom seen in older persons The etiology of the condition is usually some infection, with tonsillitis playing the most important role I have never seen a chronic case that I could feel sure was due to dental infection, although this must be a possibility

Chronic nephritis in childhood may present a totally different picture from chronic nephritis in the adult A child is brought to the outpatient department complaining of lack of appetite, loss of energy failure to gain in weight, slight anemia, etc—the common type of outpatient child We examine him carefully and find nothing essentially abnormal We get a urine specimen, and find a small amount of albumin, a few casts in the sediment and perhaps a few red blood cells We then take the blood pressure and find it normal, or perhaps slightly below normal nor is there any hypertrophy of the heart If the urine contains blood and casts, we can be practically assured that we are dealing with a mild case of chronic nephritis If there is no blood and only a rare cast or none at all, the case may be one of nephritis or of orthostatic (postural) albuminuria If the patient has never been seen before, and if the existence of a previous acute nephritis is not obtained in the history, these cases may offer considerable difficulty in diagnosis The patient must be put to bed and several examinations made on urine passed while recumbent and while up and around The second urine specimen passed after the patient has been put to bed should be free from albumin if the case is one of postural albuminuria, and the albumin returns in the specimens passed while the patient is up and around Change from the recumbent to the upright position has, of course, no influence on the presence or absence of albumin if the case is one of chronic nephritis Another point of some importance, which has been emphasized by Janeway, is that the majority of nephritics show only albumin coagulable by heat, while postural cases often show protein precipitated by acetic acid in the cold, which may be euglobulin

These mild cases are not the most common type of case, unfortunately, of our recorded cases of chronic nephritis they represent about one third The heart is not at all hypertrophied, the blood pressure is not elevated, indeed, it is likely to be lower than normal There may be occasional periods of hemorrhage from the kidney, when the urine will contain considerable blood These acute exacerbations may be brought about by any acute infection that happens to attack the child, or sometimes occur without apparent cause, and are likely to be accompanied by slight or moderate edema, but the amount of edema is never excessive I recall one girl who has had in the last four years several such acute exacerbations without obvious cause, and the last time that she was seen, about a year ago, she was apparently perfectly well in every way, and her urine contained no albumin, casts or blood

The various tests for renal function often help in determining the status of these mild cases, and indeed it is in just this group that they help us more than in any other, far more than in the acute or in the severe chronic cases In the mild type of case there are two functional tests which we have found of value (1) the phenolsulphonephthalein test, and (2) the "two-hour" renal test, adapted from that of Mosenthal

The phenolsulphonephthalein test is so well known that it need not be discussed in detail, let me merely say that the normal for a child is higher than for an adult The lowest I have seen for a normal child is 64 per cent and the average of some thirty normal cases was 76 per cent This test is usually not much diminished in mild chronic nephritis, except during the acute exacerbations Indeed, I have seen normal phenolsulphonephthalein tests in several very severe cases in which there was undoubtedly much kidney damage, so a high phenolsulphonephthalein excretion does not necessarily mean that the kidney is normal A phenolsulphonephthalein test below 55 or 60 per cent, however, means in children that the kidney is severely damaged, and would tend to make us give a more guarded prognosis than would otherwise be the case

The two hour renal test is a valuable one, but is so delicate that it must be interpreted with some caution The principle of the test is well expressed by Mosenthal [1]

* Read before the Section on Diseases of Children at the Seventy First Annual Session of the American Medical Association New Orleans April 1920

1 Mosenthal H O Renal Function as Measured by the Elimination of Fluids Salt and Nitrogen and the Specific Gravity of the Urine Arch Int Med 16 733 (Nov) 1915

The kidney expresses its diminished power to functionate by a fixation of its power of concentration The normal kidney yields a urine of medium, low or high specific gravity according to the proportion of fluids and solids that must be excreted in order to maintain the composition of the body fluids at a constant level The diseased kidney, on the other hand, loses this flexibility, and the power to answer the demand for a more concentrated or a more dilute urine no longer exists

We have used this test in children as follows The child is put on a full normal diet containing a considerable amount of protein, especially with the noon meal A capsule containing 1 gm of salt, and a 2 grain pill of caffein sodium benzoate is given with each meal, to take the place of the tea or coffee used in the adult test diet Here we have a diet containing a considerable amount of salt, protein and diuretic material, all of which will stimulate the kidney to its maximum efforts Exactly 10 ounces of fluid is given with each meal, and no fluid or food whatever between meals The urine is collected in two hour periods from 7 a m to 7 p m, and the night urine from 7 p m to 7 a m Then all that is required is to record the specific gravity of each sample of urine The normal response shows a wide variation in gravity between the different specimens, in fifteen normal children there was always a variation of at least eight points between the lowest and the highest The night urine in normal children is small in amount, and almost always has a specific gravity of 1 020 or over The child with damaged kidneys, on the other hand, is unable to vary the concentration of the urine in this way, and the gravity of the individual specimens may vary only one or two points The fixation may be at a high or at a low level, and may be high or low in the same patient at different times I remember testing one girl in 1915 whose gravity was fixed at from 1 005 to 1 007, and in 1917 the same girl showed a fixation at from 1 020 to 1 022 It is apparently the fixation of gravity which is important, and not the level at which it is fixed

This is a most practical test for everyday use There is nothing complicated about it, the food does not have to be weighed, nor is it necessary for the patient to eat all of it, it is merely essential that he consume a good full diet The rules for fluid intake must be strictly adhered to, however This is a kidney test that can be made by any one, and it gives considerable information of value

Children with mild chronic nephritis often show a fixation when the phenolsulphonephthalein test is normal A fixation does not necessarily mean a severely damaged kidney, but it is undoubtedly fair to say that if fixation exists, the kidney function is abnormal The few blood urea examinations that have been made in this type of case have been normal, and I do not believe that the damage to the kidney is ever severe enough to cause a marked urea retention I should expect to get no information of value from blood urea determinations in these cases

TREATMENT

A French writer, Hutinel,[2] ten years ago wrote

> Let me insist that in dealing with these nephritic children it is especially important to pay attention to careful nursing and hygiene It is by these measures that the malady is cured or, in the more serious forms that life is prolonged Use drugs as little as possible Especially is it important not to irritate the kidney and to forbid the patient eating any substances whose end-products he cannot eliminate It is necessary moreover to do away with any coexisting infection however insignificant it may appear, and to watch carefully the mouth, digestive tract respiratory apparatus and skin In a word one must remember that the kidney is delicate, and spare it as far as possible

These words sum up most succinctly in one paragraph the general principles of treatment of mild chronic nephritis in childhood The details of the treatment may be considered under two heads

1 *General Hygiene*—General hygiene is, I believe, of far more importance than the diet The lives of these children should be most carefully supervised In this modern day all of us are continually seeing children who are overtired, overtired from too much school, too much music lesson, too much excitement too much everything The strenuous life must be strictly forbidden to these nephritic children They must be treated along the same lines that Dr Smith of New York and Dr Emerson of Boston have insisted on for their classes of underweight children—plenty of rest both physical and mental, and plenty of suitable food The question of sea or fresh water bathing often comes up, and I have had a good many mothers with nephritic children ask whether this may be allowed I do not see any reason for forbidding a nephritic child to bathe in warm water, that is, 70 F or over, but should certainly forbid it if the temperature of the water was below this Chilling of the body surface is not good for a nephritic, and it is not unusual to have hematuria or albuminuria increase if this occurs

The tonsils and teeth should receive very careful attention Certainly if the tonsils have been the cause of the nephritis, as they undoubtedly are in a great many cases of this mild type, they should be removed, and even if they have not been apparently the original cause of the trouble, they should be removed if there is the slightest suspicion that they are at all diseased Although dental infection is probably not at all a common cause of nephritis in children, the teeth of a nephritic child should be attended to and any existing focus of infection eradicated It is of the utmost importance to guard the child against all sorts of acute infections, such as colds, bronchitis, or measles, as *often these conditions, while not serious in themselves*, may cause a flaring up of the nephritic process The kidneys of these children are hypersusceptible, and they should therefore not be called on to excrete toxins of any sort If an acute exacerbation occurs, the child is of course put to bed, and is treated the same as an acute case would be

2 *Diet*—While it certainly would not be wise to allow an unrestricted diet to these children, it is a worse mistake to restrict it too closely There is no reason for omitting meat entirely from the diet, nor is there any good evidence that red meat is any less desirable than white It is not at all certain what the minimum protein requirement of any child is, but it is undoubtedly a considerable amount, and in a long drawn out condition such as chronic nephritis, there is no necessity of depriving the child of meat Meat once a day will certainly do no harm Meat soups I do not believe in, as their food value is practically nil, and it is possible that the kidney might be injured by the considerable amount of extractive material they contain There does not seem to be, however any actual proof that meat soups do harm though all writers on

2 Hutinel Bull med 24 95 1910

nephritis are agreed that they should not be given Epstein's high protein diet does not come into consideration here, as this is a nephritis with little or, at most, moderate albuminuria, and large amounts of albumin are not being lost from the body, as in the cases to which he refers If a child likes his food very salty, this taste should be discouraged, otherwise there is no especial necessity for salt restriction For the severe cases of chronic nephritis with edema a low salt intake is, of course, desirable

Water is one of the best therapeutic agents there is for many diseases, and a nephritic child without edema should be encouraged to drink water in order to keep his urine at a low specific gravity, and to dilute the products that are excreted through it

The diet of these children may be thus summed up meat, fish or eggs once a day, no meat soups, a moderate salt intake, and plenty of water Otherwise the diet can be the same as for any other child

3 *Prognosis*.—The prognosis of any diseased condition is what, after all, interests the patient most There are three prognostic possibilities to be considered in mild chronic nephritis First, the kidney may recover entirely, after a period of several years' albuminuria Secondly, a severe and fatal chronic nephritis with large amounts of albumin in the urine, and edema, may supervene, and thirdly, contracted kidney may develop, giving rise to the clinical picture known as chronic interstitial nephritis The first two of these possibilities I know may occur, but I have followed no cases long enough to be sure of the third The reparative power of a growing child is remarkable, and it is quite possible to recover entirely from this mild type of nephritis I have seen one patient apparently recover after four years of albuminuria, and another after two On the other hand, not a few cases get worse, particularly after each acute exacerbation, and on the whole, the chance for recovery is probably not as good as for the development of a severe nephritis in the course of time The functional tests already referred to are of considerable value in prognosis Repeatedly low phenolsulphonephthalein tests usually indicate a bad prognosis, and yet I can recall one girl who never has had a phenolsulphonephthalein test above 40 since the development of her nephritis, and who is still alive and apparently getting on very well after five years Normal phenolsulphonephthalein tests are not of much value in prognosis, as it is possible for severe kidney damage to exist with phenolsulphonephthalein outputs of from 60 to 70 per cent If a child has a normal two hour test, on the other hand, his kidneys are probably only slightly damaged, as this is a very delicate and reliable test An abnormal two hour test, with a considerable degree of fixation, means a damaged kidney, but not necessarily a severely damaged one By the combined information which these two tests give us it is possible to get a fair representation of the kidney's functional power In acute nephritis it is possible to estimate the severity of the kidney damage by the general condition of the child—in the mild type of chronic nephritis, when the child looks fairly well, and when the urinary examination does not tell much regarding the degree of kidney damage, the functional tests may help a good deal As Sir James McKenzie once said, prognosis of chronic disease is what most of us know least about, as we often lose track of our patients after a few years, and it would be necessary to follow a large number of these cases over a period of at least ten years in order to have any really adequate idea concerning their prognosis

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ABSTRACT OF DISCUSSION

DR C F WAHRER Fort Madison, Iowa These affections are seldom primary They are secondary to rheumatism, often cardiac conditions, and sex The boy has a good deal to do with it He goes fishing all day, for instance, crosses the creek and comes home wet, or in the wintertime he indulges in snowballing, and gets thoroughly wet In the case of a girl, the present tendency of dress will not help a great deal We are told that diet has a great deal to do with it Diet is an important factor, as is also the wearing of proper clothing in the cooler parts of the year Do not bear too heavily on drug treatment, because although you may succeed for a short time, you might awaken an exacerbation of a nephritis in one of these chronic cases The prognosis is favorable rather than unfavorable The majority of patients will ultimately recover though so gradually that only repeated tests will satisfy you that the patient is doing well

DR JOHN LOVETT MORSE, Boston One of the hardest things to determine in connection with this class of cases is when a subacute nephritis ends and a chronic nephritis begins, because almost all of the cases start as an acute hemorrhagic nephritis, become subacute, and then finally chronic I have never quite made up my mind as to what it was in the urine that showed when a case was subacute and when it was chronic, or as to what length of time made the diagnosis The vast majority of physicians are satisfied when they get the urine free from albumin in acute nephritis They examine the urine find no albumin and call the patient well You cannot call a patient well on one negative examination for albumin The patient is not well until his urine is clear when examined microscopically after being centrifuged My plea, therefore, is to endeavor to prevent the development of a chronic nephritis by sufficiently long treatment of the acute nephritis, and to prevent it by the same line of treatment Dr Hill mentioned in speaking of the curative treatment

DR GEORGE DOW SCOTT, New York In one hospital we have quite a number of nephritis cases after the acute contagious diseases The younger the patient the quicker the recovery Urine examination should be made always and it is interesting and instructive to see the urine change for the better often from day to day I take issue with Dr Hill in giving animal proteins in such cases Clinical experience would warrant me in choosing the vegetable and fruit proteins instead Frequent bathing and open fresh air are essential

DR H M MCCLANAHAN, Omaha Twenty-seven years ago I attended a child with scarlet fever, complicated by acute nephritis of the hemorrhagic type, and general anasarca The child was seriously ill, but recovered I have kept in touch with that young man until the last two years He was a football player and an athlete He is a very well man On the other hand, a girl who recovered clinically from acute nephritis again developed nephritis two years later, probably as the result of a tonsillar infection, and died I wonder whether in any of these cases an acute acidosis developed as in nephritis in the adult, and if so what the treatment was

DR LEWIS WEBB HILL, Boston I have not seen any acidosis in these cases I believe it is more likely to occur in adults with contracted kidney than in these children I do not mean to say that chronic nephritis in childhood, as a rule, is mild, because that is not so The particular type of case I was speaking about today is mild Children have very severe forms of nephritis just the same as adults And many of them die from it As Dr Morse said, it is very important to pay a good deal of attention to the urinary sediment before discharging the patient A little albumin in the urine I would not mind much, providing the sediment were perfectly clear but if there were still a few red blood cells in the sediment I should be very careful about letting that patient up I said that I would begin to call a case chronic after it had been going for about a year That is purely arbitrary, and possibly some people would not agree with that

UMBILICAL CONCRETIONS

REPORT OF CASE

MILES F PORTER, A M, M D
FORT WAYNE, IND

History—Mrs C E C, housewife aged 62 married thirty years, sterile, was referred to me by her family physician because of a tumor in the umbilicus The menses came on at 12 years, when she flowed freely for more than a week and then stopped for a year, and was never regular afterward She never flowed enough to require a napkin The menopause occurred at 52 The patient had lung fever when 12 years of age She had had stomach trouble for fourteen years which at one time was pronounced gastritis and two years before I saw her the diagnosis of cholecystitis was made She had had a great deal of stomach distress and vomiting with no typical gallstone colic and no jaundice She had had a black spot in the navel for three years When 16 or 17 years old she had an attack of inflammation of the umbilicus accompanied by swelling, redness pain and discharge of pus and was in bed for about a week The family history was negative except that the mother died at 52 years of age from rupture of the gallbladder, and one sister had a tumor of the breast removed fourteen years before I saw the patient Her general health was quite good, but she was annoyed by a lump in the navel which had appeared a month before and which at times felt quite sore

Examination—The patient was well nourished rather short in stature, and of medium complexion The chest was negative The abdomen was covered, especially in the upper part with a large number of pigmented moles On the right was one as large as a kidney bean and papillated, and which the patient said "shed its seeds" at times A very dark tumor was present at the orifice of the navel, which orifice was three-sixteenths inch in diameter There was no abnormality of the skin about the navel and no discharge It could not be determined positively whether or not the tumor extended into the abdomen The tumor seemed to be about the size of a filbert, hard and quite tender There was marked tenderness over the gallbladder, but no tumor Based on the history and examination, a diagnosis was made of pigmented mole of the umbilicus and chronic cholecystitis In view of the possibility of malignancy together with intra-abdominal involvement, it was advised that the abdomen be opened and that further surgical procedure depend on the findings

Operation—A short vertical incision was made in the epigastrium through the inner border of the rectus There was found no intra-abdominal extension from the umbilicus The gallbladder was thin and contained many stones The incision was enlarged and cholecystectomy was performed The peritoneal cavity was closed with a small roll of rubber dam placed at the upper end of the wound for drainage The umbilicus with the contained tumor was excised by an elliptical incision down to but not through the peritoneum This wound joined the vertical incision at its lower end at right angles Closure of the wound was now made in the usual way The large mole on the right of the abdomen above referred to was excised

Postoperative Findings—The walls of the gallbladder seemed normal to the unaided senses, and contained a small amount of yellow mucilaginous bile and a number of light colored mulberry calculi The opening in the navel was enlarged by an incision whereupon it was found that the tumor consisted of a firm hard collection of skin detritus which could be delivered from its nest after the opening was enlarged The concretion after delivery was found to be spherical with a nipple-like projection which was dark brown while the rest of the concretion was pearly white in color

COMMENT

The criticism may well be made in this case that a closer examination of the umbilicus would have revealed the true condition, which could have been cured by enlarging the umbilical orifice and removing the concretion As we believed that we had a mole to deal with that was possibly malignant, all unnecessary manipulation was avoided as dangerous However, here was a woman of cancer age, with a number of pigmented moles on the abdomen, one of which was annoying her at times, and a pigmented tumor of the umbilicus, which could be seen though a narrow opening at the bottom of a rather deep well, and with a chronic cholecystitis Cancer of the umbilicus is usually secondary to cancer of the stomach, the intestine or the gallbladder,[1] and cancer of the gallbladder is superinduced by gallstones and infection of the gallbladder In view of all the facts the course as outlined above was decided on The question of an umbilical concretion was not entertained If it had been, the result would have been a trivial operation relieving the patient of the concretion and leaving her with her gallstones and quiescent cholecystitis with the attendant dangers of this condition As it is, the woman is relieved of both her gallbladder disease and her umbilicus, with its contained concretion Such a mistake may occasion some little chagrin to the physician, but it leaves the patient with no cause for regret That my confreres may avoid the little annoyance that was mine because of this mistake is one of the reasons for this paper

Umbilical concretions are rare Gould and Pyle[2] refer to two reported cases, and Cullen[3] in his classic work reports twenty-eight cases No reference was made to the subject in quite a number of works on surgical diagnosis, pathology and tumors consulted in the preparation of this paper So far as I know, Cullen's work is the only one which treats the subject in a thorough way, and I have drawn on it freely for the facts that follow Rarely is the condition recognized until some complication calls attention to it Pain referred to the umbilical region is usually the first symptom noted, but the pain may be referred to the whole abdomen, very severe, cramplike periodic and sometimes leading to the extrusion of the concretion In the majority of cases the symptoms are those of local infection but occasionally these symptoms are removed a short distance from the umbilicus

Chronic or periodic discharge from the umbilicus accompanied by signs of infection, should lead one to suspect the presence of a concretion The condition has been mistaken for cancer, tuberculosis and dermoid cyst, and, in one case at least, it was the cause of a primary cancer Granulomas quite frequently form as a result of the long continued infectious process, and these may be and indeed have been mistaken for cancer The condition but seldom leads to serious consequences, and, as Cullen says, "The history of these cases is characteristic and there should be little difficulty in establishing a diagnosis" It is pertinent to add that there would be little difficulty in establishing the diagnosis in a given case provided the physician during his examination had in mind the condition

The treatment of course, is simplicity itself consisting of dilatation of the opening, complete removal of the foreign substance and cleaning of the cavity Prompt recovery always follows

1 Keen W W Surgery Its Principles and Practice Philadelphia W B Saunders 6 446 1913
2 Gould and Pyle Anomalies and Curiosities of Medicine 1897 p 792
3 Cullen T S The Umbilicus and Its Diseases Philadelphia W B Saunders 1916 p 250 et seq

Umbilical concretions are more common in males than females As a matter of interest, it may be well to call attention to the fact that this woman was sterile, that she did not menstruate normally, and that she had a more than ordinary growth of hair on the face

A CASE OF CEREBELLAR ABSCESS DIAGNOSED POSTMORTEM

ABRAHAM LOBELL, M D
NEW YORK

History—A man, aged 29 born in Germany, whose parents, one sister and four brothers were living and well, who showed no hereditary predisposition to tuberculosis or diseases of the nervous system, who denied venereal infections, and who had been married recently, was struck over his right ear with considerable force seventeen years before, by his schoolteacher He fell against an object, subsequently suffered from pain and a purulent discharge from the right ear for a long time, and his sense of hearing became impaired on that side Since that time the discharge had recurred about once every year up to about seven years before I saw him, during which period there had been no recurrence There was an indefinite history of occasional dizziness and slight headaches, but he had no vomiting vertigo or any disturbance in walking There was no cough, expectoration or loss of weight His appetite was good digestion perfect and bowels regular He drank beer and smoked in moderation He slept well and worked as foreman in a sausage factory About two years before his right foot had been operated on From the description of the case I judged it to have been an osteomyelitis of the metatarsal bones The wound healed promptly and had remained closed since The origin of the infection was unknown at that time There was no history of trauma

The present illness dated back to Feb 13 1920 It began with frontal headache blocking of the nasal passages, chilly sensations muscular pains and slight fever The patient considered it an ordinary cold The next day he perceived pain in his right ear and noticed some moisture The frontal headache shifted to the right parietal region It was a sharp and boring headache He consulted an ear doctor in his office, and received some drops for the ear and the day after he was somewhat relieved However the next day the headache and fever reappeared He received some additional treatment and was relieved for a few days

February 21 his symptoms reappeared and I was called to his home for the first time His chief complaints were frontal and right parietal headaches, slight pain in the right ear blocking of the nasal passages, pains in the lower extremities, anorexia and some fever

Physical Examination—The patient was 5 feet 8 inches in height and weighed 160 pounds He did not appear very ill His respirations were normal the temperature was 101 F, and the pulse 96, of good quality and regular The skin and mucous membranes showed a slight degree of anemia There were no enlargements of any lymphatic glands There were several scars on the right foot The pupils were normal in size and shape equal and reacted to light and accommodation There was no nystagmus There was no palsy of any ocular muscles The eye grounds were normal He had a hypertrophic rhinitis a deviation of the septum to the right, and a prominent superior turbinate on the same side The olfactory function was present The right eustachian tube was blocked by mucus The pharynx was markedly injected, it had the reddish appearance that we often see in grip cases The left tympanic membrane was normal in appearance and hearing was perfect on this side The right external canal contained a small amount of mucopurulent material The drum had a gray necrotic appearance and showed an irregular postero-inferior perforation The hearing was markedly impaired on this side The right mastoid process was slightly larger than the left, but there was no redness or swelling, and no tenderness at any point The heart lungs and abdominal organs were negative There was no Kernig sign, no Babinski reflex, and the knee jerks and the reflexes of other parts of the body were normal The urine examination was negative

Treatment and Course—In view of the fact that the chief complaints were those we usually find in grippal infections, it was natural to suppose that such infection had awakened the old ear condition and that therapy ought to be directed toward the primary cause Accordingly, I ordered absolute rest in bed, plenty of fresh air, proper hygiene and diet the usual internal medication and local treatment for the ear, nose and throat The results were very encouraging The patient improved every day The temperature remained normal without any antipyretics The appetite reappeared, and convalescence was rapid February 27, he was up and about, feeling perfectly well his general appearance improved, and the discharge of the ear diminished considerably He demanded to be permitted to resume his vocation, but I cautioned him to take another week for recuperation Against my advice, he went to his place of business and celebrated his recovery with beer and sausages This resulted in some gastro-intestinal disturbance, but it cleared up promptly

Second Attack—March 4, I was called and found the patient complaining of virtually all of the original symptoms It was reasonable to assume that he suffered from a relapse a common occurrence in grippal infections and the previous treatment was immediately instituted Within twenty-four hours after this, I was convinced that he did not respond to the treatment so well as previously The headache was not relieved It was more agonizing, intense and boring in character He showed signs of pain in the face He had no vomiting and no dizziness The urine examination was again negative

In the presence of a chronic ear discharge, the first inclination was to explain the aggravation of the symptoms by a deep seated progression of the infection into the neighboring areas of the middle ear There was no tenderness over the mastoid Pressure and percussion over the skull elicited no tender area The headache was most intense over the right parietal region I urged immediate hospital observation in order to obtain the aid of a neurologist aurist roentgen ray and laboratory Having some prejudice against hospitals, they refused my advice and were willing to obtain such services at home

A roentgenogram revealed a marked difference between the right and left mastoids The cells of the right were entirely obliterated and a definite involvement of the mastoid was thereby pronounced However, the absence of clinical evidences of a mastoiditis led one to suspect a brain abscess A neurologic examination failed to reveal any signs that would localize a destructive area of brain tissue There was no functional disturbance of any cranial nerves, especially the optic nerve The sensorium was perfect He perceived and localized pain, touch, heat and cold The reflexes were normal and equal on the two sides of the body Muscular coordination was perfect There was no staggering gait, no scanning speech The field of vision was not contracted There was no diplopia A lumbar puncture was negative, except that the pressure was rather high There was no vomiting no bradycardia, no rise in blood pressure Up to that time there was no excitation, such as delirium, and no depression such as drowsiness or stupor However, during the night of March 5, there was a sudden change The headache became unbearable delirium set in and increased continuously up to the time of operation March 6 Dr I M Heller examined him and convinced the people that he must be operated on immediately

The history, present physical findings and roentgenogram pointed to an intracranial infection of otic origin Ordinarily, one would first attempt to localize the remote brain infection in order to determine which part of the cranium should be trephined whether or not it could be reached through the mastoid route But in this case in view of the sudden alarming symptoms, procrastination was contraindicated The plan was to explore the mastoid a procedure advocated by most aurists, especially in cases in which a brain abscess is not

localized The object of this is manifold The primary focus should be exposed in the mastoid and the track of infection traced to facilitate the localization of the abscess in the cranium, to establish temporary drainage in those cases in which a definite localization becomes impossible or the patient's condition does not permit any further exploration at this period

March 6, at 3 30 p m, the operation was started with ether anesthesia The usual radical mastoid operation was performed The unusual findings were an absence of all landmarks due to previous inflammatory processes The cortex was exceedingly dense and sclerosed There were no mastoid cells encountered, no pus was found until the antrum was reached, and there we found only a few drops A search for a track leading into the cranium was unsuccessful There was no necrosis or softening of bone at this point that would permit the passage of a probe The operation was very difficult and the necessary speed could not be employed In the first place, the dense bone prevented the operator from using the rongeur, an instrument that saves considerable time Secondly, the sinus was in an anomalous position It was through skill and vigilance that the sinus was saved Throughout the operation the condition of the patient was not satisfactory He was cyanotic and the respirations were irregular The operator was compelled, under these circumstances to give up the plan of entering the cranial cavity at this stage He felt that it would be to the best interest if he postponed further manipulations until the patient rallied Unfortunately the patient died in the ward shortly after the operation, from paralysis of respiration Dr Brakestone of Lebanon Hospital House staff performed a partial necropsy and found a cerebellar abscess The cultures revealed a mixed infection, with a pneumococcus as the predominating organism

COMMENT

This case is a concrete example of the serious complications to which the human organism is subjected in the presence of a chronic focal infection In this man, it was the cause of a cerebellar abscess and very likely the osteomyelitis of the foot

Did this man walk around with a so-called latent abscess, lying dormant for many years and only aroused to mischief by an intercurrent secondary pneumococcus infection? That this is not uncommon in spite of the absence of definite symptoms, has been established by numerous observers To explain how this takes place it is necessary to recall the cardinal symptoms and signs of a cerebellar abscess, namely, headache, mostly occipital, persistent vomiting, dizziness, vertigo, staggering gait, etc These are the very signs and symptoms of a labyrinthitis, a condition invariably associated with cerebellar abscess in those instances in which the infection travels by contiguity through the labyrinth from the mastoid to the cerebellum However, in those cases in which the infection travels through the small veins from a necrotic area in the cells of the mastoid, the destruction of the cerebellar tissue is a slow and gradual process, and the labyrinth remains intact, capable of taking up the function of the cerebellum It is for this reason that in this variety there are no signs and symptoms, and the Barany test is also negative In addition to the labyrinth, the destruction of cerebellar tissue is also compensated by the cerebrum, the vestibular nuclei and the sensory tracts

We may inquire into the immediate cause of the death in this case, but a true explanation is only problematic In other reported cases of similar outcome, it was thought to have been caused by the pressure of the abscess on the medulla, as a result of an increasing edema from ether congestion of the brain It is for this reason that some authorities advise judicious and careful administration of chloroform in preference to ether in diagnosed cases of cerebellar abscess, believing that it produces no congestion in the brain Another important factor must be considered in the causation of immediate death, and that is the performance of a lumbar puncture while the patient was still on the operating table, about twenty minutes before he died Although only 10 c c of cerebrospinal fluid was withdrawn under apparently high pressure, nevertheless it must have influenced the pressure of the abscess on the vital centers in the medulla, especially the seat of respiration This is in accord with the established dangers of performing lumbar punctures in cerebellar tumors or abscesses

It may be of interest to recall that the most deceptive element in the course of this man's illness was the fact that he improved and was well for a while This interval of well-being usually diverts our attention from the suspicion that we are dealing with a serious disease This interval has occurred in many cases that are recorded, and some observers have come to look on this as a characteristic feature of the course of the disease

320 East One Hundred and Sixty Sixth Street

OBSERVATIONS ON THE SALT CONTENT OF HUMAN MILK*

WARREN R SISSON, M D
AND
W DENIS, PH D
BOSTON

While in practice slight variations occur as a result of individual experience, the fact is generally recognized that the "normal" or standard amount of fat, carbohydrate and protein to be used in the diet of infants has in a large measure been established It is also recognized that a large class of infants when fed on so-called "rational mixtures" or even on breast-milk may develop intestinal disorders In the treatment of such infants, attention has heretofore been directed entirely to the attainment of a proper adjustment of the relative and absolute proportions of the fat, carbohydrate and protein, with an absolute disregard of the mineral constituents of the food, the practice being, of course, based on the assumption that the salts are present in excessive amounts even in human milk, and that this excess has no deleterious effects on nutrition

About a year ago we embarked on a study of the mineral constituents of human milk and of the various modifications of cow's milk ordinarily used in infant feeding Our objective was to obtain evidence as to whether some of the more obscure nutritional disorders of infants might be due to abnormalities in the mineral content of the food, as it is perfectly conceivable that an excess of inorganic salts may be as deleterious to nutrition as a deficiency

In this report only the chlorids of human milk will be considered

As the result of the examination of about 400 samples of milk, taken from the first day to the seventeenth month of lactation, we have found that after the first

* From the Department of Pediatrics and the Chemical Laboratory of the Massachusetts General Hospital
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week, during which slightly higher figures prevail, the average chlorid content of breast milk varies but little, being about 50 mg per hundred c c of milk[1] This is about the average figure given in most textbooks We feel, however, that these average figures are of little practical importance on account of the huge variations that may occur

It has been found that mothers may give milk with a constant chlorin content as low as 20 mg per hundred c c or as high as 110 mg Also, it has been noted that certain mothers show a variation of 100 per cent or more in the chlorin content of specimens of milk obtained over a period of from twenty-four to forty-eight hours Our attention has been directed to the problem of ascertaining the cause and significance of this variation The effect of diet on the chlorin content of milk has been studied from an experimental point of view and will be reported later

From our present observations on human milk we feel that diet is not the essential cause in the variation in the chlorin content, and that some other factor must play an important part

As it is well established that the percentage of chlorin in the blood is constant, it seemed possible that the threshold for chlorin secretion may vary in different subjects and also may be very unstable in certain mothers, and thus explain the variation found in different specimens As many of these mothers were well known to us it was possible to study their history, and it was found that in most instances the stable, phlegmatic type of mother gave a milk that showed essentially no variation in the chlorin concentration in specimens collected every three hours during the day The mothers, on the other hand, whose milk showed marked variation in almost all instances were very unstable types There was no constant relation between the amount of milk obtained from these mothers and the chlorin content of their milk It was interesting to note that the babies of the stable phlegmatic mothers giving an adequate amount of milk always gained satisfactorily, while in many instances the babies of the "nervous" mothers often developed diarrhea and failed to gain normally

These observations on the chlorin content of human milk emphasize the great variation of this constituent, and we feel that while this fact alone may or may not be of chemical importance, it may be an index of abnormalities of some of the other mineral constituents

ABSTRACT OF DISCUSSION

DR FRITZ TALBOT Boston I have watched this work in its progress It opens up some very interesting possibilities When we are feeding a baby on a whole milk mixture, for example, and for various reasons put it on a mixture of whey, cream and sugar, sometimes that baby has a diarrhea Very often babies on the breast also have more movements than they should have This work suggests that sodium chlorid has something to do with the diarrhea It does not tell us why one baby can take a high sodium chlorid content in the milk, and why another baby cannot, but the coincidence is such that it is very suggestive that that may be the basis of some of the diarrheas Another interesting fact is a clinical observation that Dr Sisson made, that the character of the nervous system of the mother who has the high chlorids in the milk is apt to be less stable than of the mother whose milk is supposed to be normal Of course, much more work must be done on this subject to settle exactly what it means but it is a new field, and it opens up very interesting possibilities

1 *The details of these analyses will appear in a forthcoming publication*

THE PROGRAM OF THE AMERICAN RED CROSS*

ERWIN A PETERSON, M D
WASHINGTON, D C

I want you to forget, if possible, all of the definitions which you have already heard with reference to the Red Cross program

One cannot think of any organization entering on any kind of program unless it very carefully examines itself to see whether it is the kind of organization which should proceed with that program Therefore, let us bring our thoughts together (I know you have thought about it, and I want to think with you) and get the data before us, before we consider the final points The first question is this

What kind of an organization is the American Red Cross?

Again will you please forget the definitions of the American Red Cross which you have heard

COMPOSITION OF THE AMERICAN RED CROSS

First, the American Red Cross is an organization of about 25,000,000 folks—members Now don't think that we are unaware that numbers of folks have become members of the American Red Cross by being buttonholed in hotels or on street corners and having a dollar extracted from them But a large number of folks are members of the American Red Cross because they choose to be It is, then, an organization of some 25,000,000 members grouped into chapters, auxiliaries and branches, scattered all over the United States and the possessions of the United States

Second, it is an organization of which 10,000,000 members have had definite practice in service for other folks Now, there is a good deal of difference between having an ideal of service and having actually spent your time and muscle in service The American Red Cross is an organization which has probably 10,000,000 members who have taken some time away from their daily tasks and have given that time to the service of other people They are attuned, if you will, to service on behalf of the other folks

The American Red Cross is composed of members whose service has had a romantic background There is considerable importance attached to the fact that a service is backed by romance, and the service that has been given by the millions of members of the American Red Cross has been backed with such romance as to add a greater significance to the emblem of the American Red Cross

The American Red Cross is composed of members whose service has brought to them certain rewards It is true in child training that the thing which a child does the next time is the thing that brought joy the last time" In this respect, most of us are just grown up children—the things we tend to do tomorrow are the things which brought us satisfaction yesterday Thus, service which was rendered on behalf of humanity, service to other folks which has brought the approbation not only of our countrymen but of the world, tends to be repeated or continued tomorrow We have experienced satisfaction as a

* *Read before the Section on Preventive Medicine and Public Health at the Seventy First Annual Session of the American Medical Association New Orleans April 1920*

result of having served, therefore we are inclined again to undertake service in the same way, in the same field tomorrow This inclination is a tremendous power which we must take into account when we consider the American Red Cross as a force The service given by American Red Cross workers is a service rendered under a definite banner, a banner which has stood for service for a long time, a banner which has been added to by all of these services so that when one sees the American Red Cross today one sees much more than just two crossed red stripes There has been woven into that banner so much of romance, so much of feeling of satisfaction, that there is a tendency, not a great tendency, mind you, nor is there a tendency on the part of all people, but there is a tendency on the part of many of those who have served under or supported that banner to continue—to "carry on"—under its leadership They had carried out that idea It makes no difference that there are other forces in the field which might expand to do things which the Red Cross is proposing to do The Red Cross is ready now When a better fitted or more logically chosen organization is ready to accept and carry on the responsibilities of any work begun by the Red Cross, an adjustment will be desirable and can be made

Meantime, here we have a big national organization composed of workers, and people ready to support those workers Here we have a nation awake as never before to its social needs—and large among these are health needs Shall we discard this organization because the emergency which necessitated its rapid development and expansion has ceased to exist? Shall we begin again at the bottom (or at the near-bottom of coordinating other people's beginnings), to build up a similarly great force, with a similarly great backing? Can the directors of the American Red Cross say to you social health workers 'We will junk this whole thing and let it die, because we don't need such a standing army for emergency work, but we know there is much peace time work for such a social force as the American Red Cross"?

Should we not rather say "Here is a great social force born for service ,Here is a great opportunity for national service How can this organization help to meet the country's needs? Where can the American Red Cross Service spirit best serve the American nation? What piece of work in the general peace program of reconstruction and new construction is the Red Cross best fitted to undertake?"

RECORD OF THE ORGANIZATION

It seems to me that the second point that we must discuss with reference to a program is the record of an organization Therefore we ask "What is the record of the American Red Cross in the field of health?" because we are talking about a health program

I want to go over very rapidly some of the things that would indicate the record of the American Red Cross What are the achievements? What is the thing to which we are attuned? What is the thing to which the American Red Cross member looks when he wants to tell somebody else what "my association" has done? Those things form the background on which we must build a sane program for the future For instance, the American Red Cross has placed in communities some 500 Red Cross nurses It has done in health education, for instance, a thing which is tremendous just for 1918 there were about 50 000 women graduated from the course in home care for the sick—home nursing About 16,900 in that one year were graduated from the class in dietetics There were 25,000 graduated from the first aid courses Now these are just bare figures indicating those women who were certificated from these classes and do not at all include the thousands of persons who were trained to do special pieces of work during great epidemics and disasters

In the past the American Red Cross has done two things in the health field

1 It has cooperated with our national health agencies, with our legally constituted local health authorities, with the United States Public Health Service, in doing different kinds of things in the health field, it has cooperated with these agencies in supporting financially, morally and with volunteer service movements which these agencies were promoting, picturing to its chapters the movement which another national organization was putting forward in such a way that the chapters took it up and added their influence and their energy and their work to the whole movement

2 It has always done health work in disasters it has done all kinds of work during the war, it fought typhus in Serbia, it fought tuberculosis in Italy, it fought infant mortality in France, it fought malnutrition in Belgium, and so you could go on All over war-stricken Europe, the American Red Cross did health things so there is behind the American Red Cross a tradition of doing health things It is, then, an organization of millions of persons attuned to service which has brought to them great satisfaction, and which in turn elicits enthusiasm, and it has a record of successful achievements in the field of health here and abroad

THE NURSE AND THE HEALTH CENTER

Now, with those two things in mind, that is, (1) the kind of organization it is, and (2) its record in the health field, the American Red Cross sat down to determine what specific things it should do in this country in the field of health I think is was wise for the American Red Cross to sit down and determine what the specific thing was that it should do I am glad it didn't jump into it all at once In considering national organizations from the standpoint, now, not of the physician or health worker but from the standpoint of sociologist or psychologist, there are some very important considerations which have to be brought into this discussion

First, no national organization (I am speaking now rather dogmatically, and there might be exceptions to this) has ever grown up on a basis of a broadly diversified program, that is to say, without pretty sharply defined aims, and objects capable of concrete expression A national organization which depends on lay membership for support must profess aims propose activities and produce results, which folks not you and I, but I mean lay-folks, can see

We believe that there must be definite projects which are to be held before those members for those members to see As definite a thing for instance as a Red Cross nurse in the field of health, projects that they can see and projects that answer the question 'What does your chapter do?" I Cross member thus accosted can reply Red Cross nurse, well that answers

Now, then, in the field of health the American Red Cross will set out to establish certain things One of those things is the Red Cross nurse, and another of those things is health education, which folks don't see so very well But a definite and powerful factor in health education which folks can see, which is coming now to mean something in the subconsciousness of all of us, is the health center, doing two things, harnessing the interest in health, which is dominant, and harnessing an interest in centering our efforts on some declared objective

The health center, then, is the one other activity which the American Red Cross wishes to idealize before its chapters so that when you or anybody else may say to a chapter, "What does your chapter do?" the chapter may answer, "We have a health center," and the question is answered

I want, in closing, to give this idea of what is forming in my mind as to the health center proposed by the American Red Cross

In the first stage, a health center has to do purely with striving for an education for people along health lines of telling them 'how" It must develop methods of enticing people inside its center and putting them in touch with the literature that is available all over the United States, adding the personal touch to the literature This first type may be undertaken by any chapter I am thinking in terms of my little town of about 300 population The next step adds a diagnostic clinic, next the operating clinic, and probably later adds hospital facilities for the whole county, becoming a unit taking care of the health and sickness of all dwellers in that county

This is the program of the American Red Cross

ABSTRACT OF DISCUSSION

DR J W SCHERESCHEWSKY Washington, D C I listened very attentively to the exposition of the program of the American Red Cross and I did not hear Dr Peterson say one word concerning in what way these activities are to be correlated with the activities of the properly constituted health authorities of the country We all agree that in an emergency all kinds of volunteer agencies and organizations are required to help in order that we may attain our goal quickly and decisively, but the problem of conserving the health of the people of the United States of building a health structure on broad and firm foundations is one that cannot be solved in a few months or a few years It means steady work carried on from day to day from week to week from month to month from year to year—even from decade to decade and from century to century This means that there must be a permanent properly maintained organization It also involves the exercise of police powers on the part of states and communities and the carrying out of health laws which can only be executed by the proper official agencies of the country Therefore it would follow that the program of the American Red Cross can only have two ends in view either that the American Red Cross ought to become the official health organization of the country or that the American Red Cross should be an auxiliary aid organization to the properly constituted health authorities of the country That ought to be the program of the American Red Cross, and then when that has been achieved they should retire from the field If the program of the American Red Cross is to receive the support of all health officers the American Red Cross must make some definite statement concerning its plans as to the way in which its efforts are to correlated with those of the health officers what purpose it has in mind to achieve and what goal it will endeavor to attain

DR PHILIP KING BROWN San Francisco I would like to know what it is proposed to do with the 2000 additional nurses the Red Cross desires, and how much supervision over the nursing program and public health the national headquarters of the American Red Cross will assume, and how much the local chapters will assume What is the present relationship that exists between the National Public Health Nurses' Association and the nurses of the American Red Cross? All over this country people are asking what the program of the American Red Cross is to be, and how the Red Cross proposes to correlate its efforts with those of the already existing organizations No one can know the wonderful work that the National Association for Public Health Nursing has done and not want to assist them in every way possible to enlarge in their field And when you ask for 2000 more nurses, it is natural that we should want to know what you expect to do with those nurses when we take into account the tremendous shortage that exists in the nursing field of the country today

DR JOHN D MCLEAN, Philadelphia In Pennsylvania there has already been established a very direct cooperation between the American Red Cross and the state department of health We have health centers in a number of places The local Red Cross agencies have cooperated with us in all things A number of times the words "health officer' have been used We in Pennsylvania do not like that term, "officer ' We do not want to be "officers" and we do not want to carry to the public what unfortunately that word has carried too often in the past, the idea and suggestion of police powers That is not, as we see it, our status Only in the very last extremity do we want to exercise in the full those powers which we have It is only in an extremity that we wish to use "police powers" The Red Cross nurses are working with us

DR JOHN P DAVIS New York I am merely a private practitioner Most of you are engaged in public health work I was very glad to hear Dr Peterson say that the private practitioner is a health asset in the community as well as the constituted health authorities The tendency has been, I think to drift away from the work and the influence of the private physician to that of the state or the public health officer Regarding the treatment of those people who are earning only $5 a week it was said that such persons were unable to go to the private practitioner because they could not pay and that therefore, it was the duty of various health organizations to take care of them I say that you should leave them where they have been in the past, to the average general medical practitioner The spirit of the average physician is to treat the man who comes to him, no matter what his wages may be Dr McLean has spoken about the power of the health officer Under the laws of the state of New York the health officer whether right or wrong is supreme In New York state a measure was introduced into the legislature providing that the testimony of a health officer in court could not be controverted, but would have to be accepted as a matter of record I am glad to say that this measure failed to pass and become law The arbitrary powers of the health departments are tremendous Dr McLean is right in his attitude concerning the word 'officer" One of the most unfortunate things connected with that service is the fact that they are termed 'officers", that they are considered, in a way as being policemen and that, therefore, it follows that many people have that terrible fear of health officers which is very unfortunate This should not be We should think of the health officers rather as helpers and advisers than as policemen In his speech of yesterday I heard the governor of Louisiana say that politics would not in any way enter into his program for the welfare of the lunatics, feebleminded, and all those suffering from mental troubles in the state of Louisiana This is the position taken by Governor Smith of New York on this question The spirit of preventive medicine is to be helpful rather than to sit in stern judgment Finally the object of all medical service is teaching, is helpfulness, telling people how to keep from getting sick, how to remain well

DR C W GODDARD, Austin Texas The title 'health officer' should be associated with the individual The use of the title can be held back and not emphasized But if you take from the individual the name "health officer" the laity will misinterpret this action, and it will be said, especially in

the rural districts, that the title has been taken from the health officer in general, and that will have a bad effect It will lessen in the minds of the laity, the authority of the health officer, and will limit his field of usefulness I believe the better plan, under all conditions, is not to emphasize that title of authority given to health officers With reference to the cooperation of the American Red Cross with the various state and local boards of health in Texas we have very satisfactory cooperative activities When we established the bureau of child hygiene we obtained the services of a woman who had been district director for the American Red Cross Nursing Department, and she retained this directorship for the state of Texas In this way we have a splendidly correlated work The nurses are nominated by this director of the bureau and we are placing them just as rapidly as we can We have in the past three months placed about thirty public health nurses in counties, and could today place more if they were available When these nurses are placed on duty they are given by the executive officer of the state board of health an appointment as sanitary inspector of the state board This is done quietly, without being emphasized to the people generally We issue to the nurses what we term standing orders, a set of rules which outline the sphere of activity of each of these nurses This set of rules is submitted to the local medical society for approval The nurse acts under the rules so agreed on Her relations to the medical profession are thereby outlined, and she knows what her sphere of activity is, and is governed accordingly We find this method a most agreeable one The nurses are furnished with blanks on which to make their reports of conditions of interest pertaining to public health If the nurse finds conditions in her community that are necessary to report to the state board of health, she makes her report in triplicate, sends a copy to the state board of health, one copy to the local officer and retains the third copy for herself This report is then taken up through the local health officer We are getting splendid results by that method of procedure in our section

DR E LUTHER STEVENS, St Augustine, Fla How can we take to our communities the basic ideas presented by the chairman and the program presented by Dr Peterson in his paper? How can we reach three distinct classes The business men, to get their support, the educators, those who are immediately connected with the school program, to get their cooperation, and the various organizations that are interested in welfare movements? What is the cooperative plan in connection with the charity organization idea? And what is the relation of this movement to the rapidly growing organization among the churches, the interchurch movement, which now seems to have so much of the attention of the people? The practical things which the American Red Cross organizations do, and which we have all had experience with, and have seen personally, are things that should be done in active cooperation, in thorough cooperation with all existing organizations Does the program alluded to provide for such cooperation?

DR ERVIN A PETERSON, Washington, D C The health service department of the American Red Cross has very definitely this ideal that eventually the legally constituted health authority will be the only health agency in a community I do not know how soon the American Red Cross and other private health agencies are going to work themselves out of jobs I am convinced, however, that when our democracy becomes a real democracy, that the health officer or the legally constituted health authority will be able to handle all the health problems of our country and of the different states and communities, but until that time I think he will not The health service department of the American Red Cross is definitely convinced that there surround the health officer certain very great weaknesses which are not inherent in the officer himself but have to do with social and political conditions There is a definite feeling on the part of many people that the health officer is a 'cop' and that it is as justifiable to 'beat' the cop there as it is to 'beat' him on his beat It seems to me that that has been one of the underlying reasons why great national organizations such as the National Tuberculosis Association the Cancer Commission the Child Hygiene Association the new Heart Disease Association, have arisen And those organizations have gotten tremendous support. Why? People are interested in something tangible You can see tuberculosis, you can see infant mortality You can see venereal disease On the other hand public health is big, folks cannot grasp it Therefore it is difficult to work up interest in it Many folks like to do things that officials do not do We like to assume the prerogatives of officials Until the time comes when the health officer is accepted by all as the leader in the health field, there will be a place for such organizations as those I have mentioned, and there will be much work for them to do There are many examples all over the country of health officers who have gotten far beyond and ahead of the position of being merely cops, and have taken the lead in health movements and are not only handling the situation from the standpoint of the law acting as an officer of the law, but are doing a tremendous work in health education That is the job of the public health officer of today The American Red Cross will endeavor in every way possible to help the health officer by means of nurses and health centers The American Red Cross is simply calling attention of the people to the need of wider knowledge of and wider activity in the field of public health and when that is done you will have less trouble in getting money for work in public health

There is a great demand for public health nurses The Red Cross could place 2000 on the pay rolls of its different chapters if nurses were available The Red Cross is proceeding in its nursing work with the idea that public health nursing is the function of health departments and as rapidly as such departments are ready to take over nurses hired by Red Cross chapters they are being turned over The Red Cross nursing department is cooperating with state health departments in employing supervising nurses who direct the work of the Red Cross nurses as well as those hired by the states The Red Cross is now giving its attention to ways and means of getting a larger number of women to enter training

Our studies have proved to us that there are large numbers of people in every community who do not go to the general practitioner either through poverty or ignorance or because of fear of the charge which will be made Therefore there is a considerable number of people in every community who ought to be taken care of And the answer is the clinic In organizing for the health center each chapter is advised and urged to secure as an advisory council representatives of all the operating agencies in the field of health The health officer a representative of the board of education the medical profession the dental profession and of all health association national state and local operating in the community The health center will do just what each of these agencies is very anxious to do namely educate the community in health and each agency ought to have many ideas to suggest We therefore hope to see on the advisory council which will be something different from a paper council the health officer of each community in which a health center is started

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DEATH FROM APOTHESIN SPINAL ANESTHESIA

REPORT OF CASE*

W S DUBOFF M D
EDGEWATER COLO

As apothesin has largely replaced stovain and procain for spinal anesthesia and a study of the literature has revealed no instance of death from its use, it is desirable to place this case on record

REPORT OF CASE

A man aged 43 with an extensive bilateral fibroid tuberculosis and a subacute tuberculous laryngitis became a severe dysphagia especially for fluids entailing great diffi

* From the Sanatorium of the Jewish Consumptive Relief Society,

ing, was offered a gastrotomy operation, which he accepted On account of the profound cachexia and the unfavorable pulmonary condition it was thought advisable to use spinal anesthesia For the last year we have been using apothesin, following the technic described by Orth [1]

All instruments used were washed and boiled in distilled water Puncture was made in the second lumbar space with an ordinary Quincke needle Seven cubic centimeters of spinal fluid were withdrawn, the patient sitting up at the time, with the back arched Flow was at first slow, but became rapid in a few seconds The spinal fluid was added to a previously prepared solution of apothesin (one 1¼ grain tablet dissolved in 3 c c of distilled water and boiled for three minutes), thoroughly mixed and slowly injected The patient was then promptly placed on his back with the head slightly raised on a pillow The pulse was at this time between 80 and 90, regular and of good force and size At the end of one minute the patient was unable to raise either leg, but could feel pin pricks At the end of the second minute there were anesthesia to the iliac crests At the end of three minutes the surgeon was told he could proceed But before the patient could be draped, he suddenly became ashy, complained of a tightness in the chest, an inability to draw his breath, and announced that he was dying The pulse could not be felt at this time The respirations became very labored and ceased a few seconds later The pupils were equal and somewhat contracted till after death There had been no preliminary hypodermic of morphin

There seems to be little doubt that the anesthesia was directly responsible for this patient's death The very definite and rapid ascending paralysis, culminating in cardiac and respiratory failure, could be due only to diffusion of the drug into medullary centers It also seems to be clear that cardiac failure preceded a respiratory failure Disappearance of the pulse before failure of respiration was also noted by Yount [2] in a death due to stovain injected intraspinally

Reported deaths from spinal anesthesia bear a considerable similarity, regardless of the drug used

Orth [1] had no deaths in 700 cases, apothesin or procain having been used He insists that spinal anesthesia "when properly given, with apothesin or novocain is as safe as a local anesthesia with these drugs" Yount [2] reports 7,000 operations under spinal anesthesia with stovain, and only one death attributable to the anesthetic Boyd and Yount [3] record 6,229 cases with four deaths, only one of which was directly caused by the anesthetic—stovain Kahle [4] reported twenty-four successful spinal anesthesias with punctures as high as the eleventh dorsal space Stanley [5] had 280 cases without fatality from the use of tropacocain, while Weston [6] had 170 cases without untoward effects from stovain The death reported here occurred in a small series of twelve cases, five under stovain and seven under apothesin

1 Orth D A Surg Clinics Chicago 3 201 (Feb) 1919
2 Yount C C Surg Gynec & Obst 25 40 (July) 1917
3 Boyd A S and Yount, C C Routine Spinal Analgesia J A M A 68 601 (Feb 24) 1917
4 Kahle P J New Orleans M & S J 71 366 (Feb) 1919
5 Stanley L L Spinal Anesthesia J A M A 66 1090 (April 8) 1916
6 Weston T A Brit M J 2 794 (Dec 9) 1916

Special Article

OBSERVATIONS ON SOUTH AMERICA

V URUGUAY

WILLIAM J MAYO, M D
ROCHESTER, MINN

Uruguay, with one and one-half million inhabitants, has a great agricultural future In general, the people

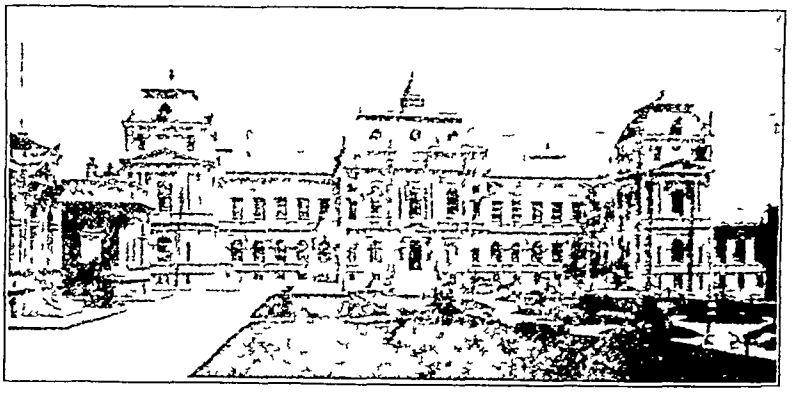

Fig 1 —Montevideo Medical School

are like the Argentinians The public administration is extraordinarily efficient Montevideo, the capital, has about 400,000 inhabitants It is a clean, attractive city, with streets well paved, even in the outskirts, and many fine parks, boulevards and suburban seaside resorts It is considered by many travelers the most beautiful and healthful residence city on the east coast of South America One of the boulevards, extending

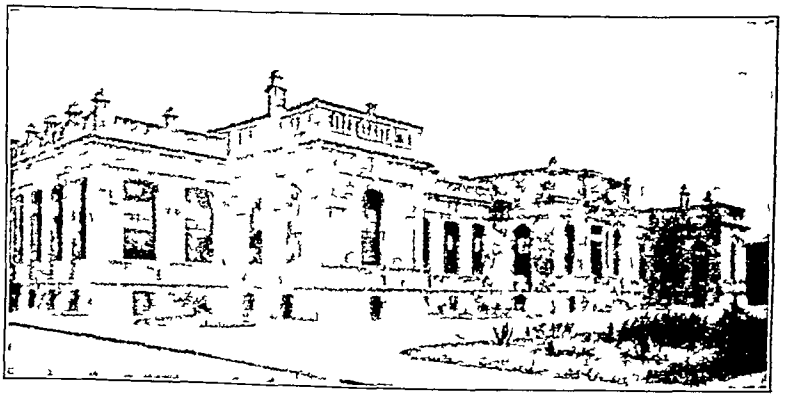

Fig 2 —Montevideo Chemical Laboratories

8 miles along the ocean, is named for President Wilson The city is 100 miles below Buenos Aires on the outlet of the La Plata River, which forms the southern boundary, the ocean forming the eastern boundary

The primary school course in Uruguay is five years and the secondary course six years The medical school, a part of the University of Uruguay, is a large, ornate and dignified building (Fig 1) Six hundred students are enrolled, and the graduating classes number from sixty to seventy The course in

medicine is seven years The medical school has a fine library The laboratory facilities and equipment are excellent (Fig 2), and there is ample material for dissection Postmortems are permitted on all patients dying in the hospitals

The hospitals in Montevideo are modern and equal to any in South America The older hospitals are built in the Spanish pavilion style, usually one story, with gardens between the pavilions The new hospitals are several stories high (Fig 3) Here, as elsewhere in South America, there are few trained nurses and an absence of screens I was told that when screens were placed no one respected their use, and, indeed, in the few instances screens were seen they were carefully propped open With the exception of the hospitals maintained by the colonies from various countries, those in Uruguay are supported by the government Accommodations are provided for pay patients, and the price of rooms in the private pavilions ranges from $3 to $6 a day One beautiful hospital (for women) is under the direction of Dr Pou Orfila, a noted surgeon The Italians have a very beautiful hospital with many interesting features (Fig 4) To prevent flies from entering the operating rooms, persons pass from the main corridor through a small antiroom which has blue glass ceiling, sides and door It has been demonstrated that flies will not pass through this blue-lighted space

The chief surgeon of the British Hospital, Dr Garcia Lagos, professor of surgery in the government

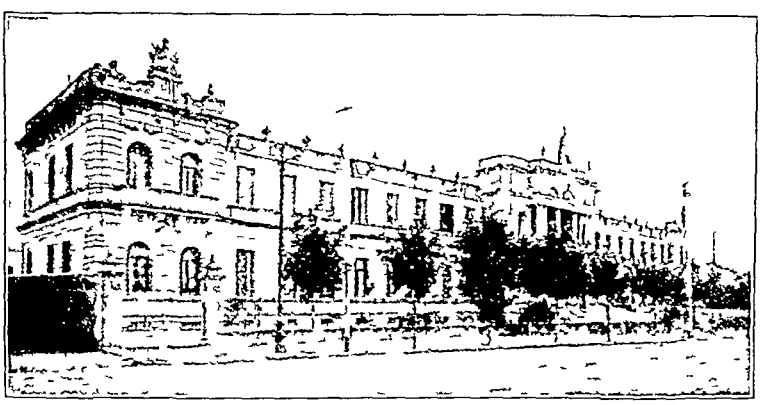

Fig 3 —Hospital Montevideo

medical school, is particularly interested in surgery of the stomach He has developed a method of dealing with gastrojejunal ulcers and hemorrhages from the gastro-enterostomy opening by making an incision in the anterior wall of the stomach, drawing the gastro-enterostomy completely through, and then proceeding according to the necessity of the case I have employed this method twice in emergency, such as hemorrhage immediately after gastro-enterostomy, but have never used it in the manner described by Dr Garcia Lagos for a direct attack on chronic conditions involving the stoma It would appear to have merit in suitable cases Dr E Pouey, the leading gynecologist of Uruguay has a fine hospital for women, just completed by the university Dr A Navarro, another prominent surgeon of South America, has splendid hospital facilities and surgical material

Gambling is a legitimate pastime, or vice, throughout

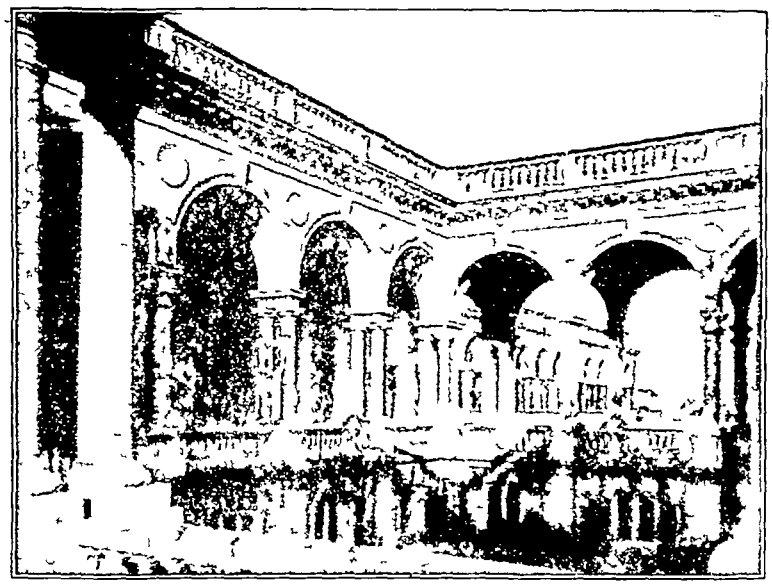

Fig 4 —Italian Hospital Montevideo

South America, and Uruguay is no exception The government supports beautiful hotels, seaside pavilions, hospitals and other charities from the proceeds of the roulette wheels Montevideo is the Monte Carlo of South America

During the Great War, Uruguay stood staunchly with the United States, and her president, Señor Baltasar Brum, a brilliant young statesman who is well known in diplomatic circles in Washington, and the able foreign minister made decisions which will be permanent additions to international law in substance, first, that a republic fighting for her sovereign rights is not a belligerent and has the right of asylum and protection from all republics, and second, that when the United States is forced into war to protect her rights she is protecting the rights of all republics, and all republics become parties to the conflict Uruguay promptly followed the United States in declaring war on the Central Powers

The Ideal Health Department —An ideal health department in a nation such as ours demands a partnership of federal state and local health departments in order to secure team work of all agencies from the federal government to the ultimate unit of health work—the individual citizen This partnership should be so clearly defined so universally understood and so conscientiously utilized that all fields of public health work will be covered with the minimum of overlapping and friction —A J McLaughlin *Comm on Health* ember December 1919

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, AUGUST 28, 1920

THE CONDITIONS IN THE BRAIN DURING STAMMERING

In attempting to ascertain the various factors, psychologic and physiologic that enter into the involuntary stops in uttering syllables or words, which constitute the phenomenon known as stammering, several studies of the circulatory changes accompanying it have been made These agree in suggesting that stammering and shock, such as result from surprise, fright or comparable manifestations are induced emotional disturbances accompanied by vasomotor changes Observations on the peripheral blood vessels have been made by various plethysmographic methods with the resulting demonstration that there is almost invariably a marked vasoconstriction According to the investigations of Robbins [1] in the psychologic laboratory at Harvard University, unusually intense shock (such as the unexpected report of a pistol) is accompanied by greater vasomotor changes in the periphery than is stammering Severe stammering, on the other hand, is accompanied in most subjects by greater vasoconstriction in the finger than is shock produced by any stimulus but the pistol The time of recovery is about the same for stammerers as a class both in stammering and in shock, but is greater for most individuals in stammering than it is in shock produced by stimuli other than the pistol In stammerers, peripheral vasoconstriction continues throughout the stammering interval, whereas, if any vasomotor change accompanies normal speech, it is vasodilatation as a rule

Physiologic investigations on trephined but otherwise normal persons have made it possible to study the vasomotor changes that occur simultaneously at the periphery and in the brain Observations made under these conditions have demonstrated that a sudden shock is always accompanied by vasoconstriction in the periphery and by vasodilatation in the cerebral tissue As Robbins had likewise noted a peripheral vasoconstriction during stammering he made the inference, in 1919, that stammering, like shock, is accompanied by vasodilatation in the brain and hence by cerebral congestion He pointed out that the latter condition affects speech more easily than it alters any other human activity Robbins learned from normal persons whose introspection was reliable that the words they were about to speak suddenly left their minds when the whistle blew, and did not return for several seconds Some of them still visualized the words, and their minds seemed otherwise to work normally, yet the sounds of the words left them and hence they were unable to say the words When vasoconstriction in their fingers ceased, the sound of the words returned and they were able to speak them The same phenomenon occurs in stammering According to Robbins, the fear of stammering and the excessive effort put forth in forcing out difficult words cause cerebral congestion, which induces the auditory images of the words the stammerer is about to speak to disappear as he attempts to utter them, just as the whistle banished the sound of the word the normal speaker wished to use and made of him a temporary stammerer

The theory of cerebral congestion defended by Bluemel [2] in 1913 was, after all an indirect inference Actual measurements of the circulatory changes in the brains of stammerers had never been made Although there are thousands of stammers in the United States it might have seemed unlikely that one could be found whose skull had been trephined Yet when a request for possible information regarding such a hypothetic person was published in THE JOURNAL [3] last year, a suitable individual was promptly discovered

As a result of this fortunate circumstance, Robbins [4] has been enabled to furnish the missing evidence regarding the actual condition of the brain during stammering The patient had sustained a bullet wound of the right frontal region without evidence of any brain injury Evidently the bullet was removed and a small trephine hole left open Through the skin loosely covering this, pulsations of the brain mass were often conspicuous and a glass plethysmograph was readily applied to record the volume changes in what is, so far as we are aware, a unique case for study in medical literature The observations show that pronounced shock, fear of stammering and emotions of every kind always brought about increase in brain volume accompanied by increased size of pulse Stammering was accompanied by much more marked increase in brain volume than could be accounted for by either the physical or the mental work used in normal speech When the stammerer read as normal speakers do, there was a return of the brain volume to normal, it is reasonable to conclude that increase in brain volume is an important factor in the production of stammering

The theory of Bluemel that stammering is caused by transient auditory amnesia in the auditory speech cen-

1 Robbins S D A Plethysmographic Study of Shock and Stammering Am J Physiol 48 285 (April) 1919

2 Bluemel C S Stammering and Cognate Defects of Speech New York, 1913

3 Finding the Proverbial Needle Current Comment J A M A 73 1704 (Nov 29) 1919

4 Robbins S D A Plethysmographic Study of Shock and Stammering in a Trephined Stammerer Am J Physiol 52 168 (May) 1920

ter brought on by cerebral congestions has at length found substantiation in the results of direct observation on man Evidently the fear of stammering and the forcing out of hard words which accompanies stammering cause vasoconstriction in the periphery and cerebral congestion As Robbins expresses the situation, the congestion blurs verbal imagery, especially auditory verbal imagery, and makes it impossible for the stammerer for the time being to recall a part or the whole of the word he wishes to speak at the moment he has to say it In order to correct stammering, both the fear of stammering and the abnormal muscular contractions which usually accompany stammering must be eliminated

THE MEANING OF REST TO PATIENTS

One of the fundamental dicta with regard to metabolism is that it increases with work or muscular effort How large, comparatively, the increment may be is less well appreciated The answer to the question has an important bearing on the food requirements of the working person there is also a significant relationship of effort to energy expenditure in the case of the sick who need to conserve or gain The doctrine of rest, either complete or limited, is one that the physician finds desirable to inculcate often What is gained thereby in the mere conservation of food fuel or body tissues can be well understood by a consideration of what exertion really entails The expenditure of energy in the body is affected by a number of factors, which include age, size, sex and occupation The loss of energy per unit of accomplishment is greater in those cases in which the worker is untrained and the muscles are unpracticed for their tasks Fatigue also causes inefficient performance

The activities of a recuperating or resting patient are comparable in some degree with the lightest types of housework What this may mean in terms of energy has recently been described by Langworthy and Barott[1] of the Office of Home Economics, U S Department of Agriculture Light tasks, such as sewing, chroheting or embroidering, call for an average expenditure of about 9 calories an hour more than that of the same person sitting quietly in a chair Tasks regarded as "harder work" than sewing, such as washing, sweeping or scrubbing, require an increment of at least 50 calories an hour

The government experiments have shown how the mere change in the height of the table at which work is being done may cause an increase of from 20 to 40 per cent in the calories required This illustrates, to quote the report, the importance of choosing equipment to "fit" the worker If the lesson is applied to the sick room, however, it serves as a patent reminder of what is too often overlooked by both the patient and attendants namely, that it requires only a seemingly small degree of discomfort or added effort to waste a relatively large fraction of available "strength" and energy Conversely, complete rest represents the possibility of real conservation if the food intake and the metabolic capacity are not impaired Even easy work—indeed sometimes mere sitting up or the operation of dressing—means a real cost to the body which it may be well to save in times of nutritive stress, when economy of energy is an immense gain to the patient

1 Langworthy C F and Barott H G Energy Expenditure in Household Tasks Am J Physiol 52 400 (June) 1920

THE CARE OF CARDIAC PATIENTS

Patients with cardiac disease present one of the most difficult therapeutic problems confronting the medical practitioner More attention seems to have been bestowed on diagnosis than on any phase of cardiac disease indeed treatment has been well summed up under the simple terms rest digitalis and general hygiene The outlook for the future of such patients has therefore not been particularly encouraging However one of the few benefits of the great war was the directing of the attention of physicians and educators toward reconstruction of persons disabled and handicapped and certainly the patient with a weak heart is as crippled as the one who has lost a limb An indication of this interest appears in a recent issue of the *Hospital Social Service Quarterly*, which contains two contributions on the care of cardiac patients

St Lawrence and Adams[1] report in detail the efforts being made for cardiac children Diagnosis once made, the first step is the elimination of such factors as focal infection and undue physical stress, which may hasten the gradual decline that has been an invariable feature of the lives of such children Classes are formed in which regular examinations are made and thus unfavorable complications prevented Rheumatic manifestations, chorea and focal abscesses are sought for The capacity of these patients for work is determined, and the patients are divided into groups of first, second and third degree, indicating the amount of work that the patient may undertake First degree patients have a normal exercise tolerance, second degree patients have a lessened tolerance and third degree patients are referred to a hospital ward The graduated exercises include calisthenics, climbing of stairs, and the ordinary forms of games and sports

Arrangements have been made through the organization for sending children to the country following severe operations prolonged ward residence or failure of improvement The patients are followed into their homes, and arrangements are made for vocational training and education According to the authors, the results obtained have been excellent Whereas formerly work with cardiac patients was discouraging and uninteresting under this systematic method of control the future seems promising

1 St Lawrence W P and Adams F Louise The Organization of Cardiac Children Hosp Social Service Quart 2 1 (May) 1

A further effort toward the care of persons handicapped by cardiac disease is outlined by the director[2] of the employment bureau for the handicapped, which is maintained by the Hospital Social Service Association of New York City. One of the greatest difficulties to be overcome in the care of chronically diseased or permanently disabled persons is the establishment of a hopeful outlook for their independence. Such patients more than anything else fear poverty and dependence. Therefore the successful establishment of an organization which will find for them occupations suitable to their condition is a step forward.

From June, 1919, to February, 1920, 305 patients with cardiac disease were referred to the bureau. Of these, 161 were placed in good occupations, of whom 117 were still in their original positions. In finding employment for cardiac workers, it is necessary to remember that such patients cannot do heavy lifting, cannot climb stairs, and cannot operate any but small hand-machines. They are, however, quite well suited for light sedentary work, such as may be found in fountain pen factories, the jewelry industry, piano factories and the tobacco industry. Women are referred to positions in carding jewelry and in sewing and mending laces. Others are placed in hotels where light work has been found for them. One of the chief difficulties of the bureau has been to assure employers that such employees would not "drop dead" at work. The records indicate that there have been no sudden deaths and no accidents among these persons placed by the bureau, and that no workmen's compensation has had to be paid to any of the persons employed. The results are good evidence of what may be accomplished through careful study of individual tolerance and selection of occupation to suit the physical condition. The cooperation of the physician in such social service is fundamentally necessary, and he should be prepared to take an active part in the work.

2 Duggan, Ida M.: Employment for the Handicapped. II. The Cardiac Hosp. Social Service Quart. 2: 227 (May) 1920.

DANGERS OF PLASMA DEPLETION

In clinical practice as well as in the experimental laboratory, occasions frequently arise when it becomes highly desirable to secure some acceptable substitute for blood. The recognition of this need in the case of surgical or traumatic shock, in particular, has led to a prolonged search for the "ideal" substitute. As has been pointed out at various times in THE JOURNAL, few if any of the proposed fluids for introduction into the circulation meet the essential requirements. Some, like physiologic sodium chlorid solution, disappear so rapidly that their influence in maintaining the desired effectiveness of the circulation is speedly lost. So far as the restoration of a depleted blood volume with consequent maintenance of an adequate blood pressure is concerned, the use of fluids containing colloids, such as gum acacia, has lately found some favor. Owing to the osmotic pressure of the colloid gum, which cannot readily escape from the blood vessels, fluid which would otherwise disappear is retained within the blood vessels.[1] But even this solution is no panacea. Evidently there are numerous conditions under which poisonous products may arise in the body in direct or indirect relation to circulatory failure. These factors making for harm are as yet only imperfectly understood.[2]

A further possible agency in the failure of the various "substitutes" for blood has been brought into notice by the experimental studies of Whipple[3] and his collaborators at the Hooper Foundation for Medical Research, University of California. After withdrawal of large amounts of blood by hemorrhage, they have attempted to replace the loss with various fluids in all of which red corpuscles of the same species were returned to the circulation. If the fluid returned is protein-free, one may speak in such cases of plasma depletion or plasmapheresis to indicate a loss of plasma protein by means of hemorrhage followed by the replacement of like amounts of red corpuscles. When this process of depletion is carried out to a considerable extent, complete restoration of the lost serum proteins is only slowly accomplished. According to the latest findings, when the depletion of the total serum proteins is carried below 1 per cent., fatal reactions are likely to ensue. This is not due to mechanical factors, such as the removal or return of fluids to the circulation, for when a mixture of red blood cells and serum instead of saline solution is returned to the blood stream, the ill results do not follow similarly.

The symptoms observed in animals deprived of undue amounts of serum proteins represent the clinical picture of "shock." Whipple believes that the serum proteins represent an essential part of the "environmental complex of the body cells." The blood serum proteins are looked on as "stabilizing or protective factors," and their alleged role in the interrelations of blood to tissues is regarded as the most important function of these plasma colloids. At present they are not believed to be concerned primarily with the nutrition of the body, although this was long assumed to be the foremost use of the serum proteins.

As yet the etiology of the condition of shock observed in the plasma depletion just defined remains obscured in hypothesis. The California investigators

1 Bayliss, W. M.: Intravenous Injection in Wound Shock. New York, Longmans, Green & Co., 1919.

2 Factors Facilitating Circulatory Shock, editorial, J. A. M. A. 75: 247 (July 24) 1920.

3 Smith, H. P., Belt, A. E., and Whipple, G. H.: Rapid Blood Plasma Protein Depletion and the Curve of Regeneration, Am. J. Physiol. 52: 54 (May) 1920. Whipple, G. H., Smith, H. P., and Belt, A. E.: Shock as a Manifestation of Tissue Injury Following Rapid Plasma Protein Depletion, ibid., p. 72. Belt, A. E., Smith, H. P., and Whipple, G. H.: Factors Concerned in the Perfusion of Living Organs and Tissues, ibid., p. 101. Kerr, W. J., Hurwitz, S. H., and Whipple, G. H., ibid. 47: 356, 370, 379 (Dec.) 1918.

believe that certain body cells, notably those of the liver, are decidedly sensitive to changes in the content of circulating serum protein The essential injury under these circumstances is, they assert, cell protoplasm injury induced by a sudden change in the colloidal solution which forms the normal environment of these cells This, they add, may be a new type of cell injury, but it may help us to understand the more complex cell injury which is probably responsible for "surgical shock" It is suggested that the suspension of tissues in saline solutions prior to transplantation, and likewise the perfusion of organs with such protein-free mediums may be detrimental to the purpose to which they are to be put These solutions may be objectionable because of what they lack rather than because they contain positively toxic ingredients Perhaps far more consideration will necessarily be given in the future to the harmfulness of diluted blood plasma, if slight modifications of it can actually produce such profound effects on the body cells

Current Comment

DECLARING THE ALCOHOL PERCENTAGE

And now comes the *American Druggist* and suggests that the National Food and Drug Act be amended so as to delete the requirement of statement of alcoholic content on the labels of drug products According to this representative of pharmacy, to require longer a declaration of the alcohol content on medicines would be inimical to the public welfare as the statement 'is an incentive to the uninformed and depraved to resort to the use of drug preparations containing alcohol, as a necessary constituent, for intoxicating purposes" If our memory serves us there were at least a few people who "resorted to the use of" Peruna and similar nostrums for "intoxicating purposes" long before the Food and Drugs Act required these products to declare their alcohol percentage According to this same authority, alcohol in medicinal preparations "is used at present, almost exclusively, for solvent preservative and extraction purposes, and not for therapeutic purposes" Was there ever a proprietary remedy in which the alcohol—ranging from 10 to 47 per cent—was *admittedly* a therapeutic ingredient? Another argument advanced is that processes of manufacture are trade secrets and should not be required to be divulged and as the "vehicle of a drug preparation is a part of the process of manufacture, and since the vehicle is frequently alcoholic [We'll say it is!—Ed] a statement of alcoholic content often deprives the manufacturer of one of his legitimate means of competition" But the crowning argument of all made by our esteemed contemporary is that 'the deletion of the now unnecessary alcohol statement would permit the inclusion of more important information on the label' Yes indeed! The words *"CONTAINS 25 PER CENT ALCOHOL"* take up so much valuable room, space doubtless that the manufacturer of proprietary remedies would prefer to use in giving the public information regarding some of the other ingredients of his nostrum that the federal law does not require to be declared on the label With the appropriations for the Bureau of Chemistry cut down to a point where it will be rendered impotent to proceed against fakes in medicine, and with the drug trade apparently about to insist that the teeth of the Food and Drugs Act shall be drawn, the nostrum interests must be looking forward to prosperous times

RENAUDOT AND THE FIRST FRENCH NEWSPAPER AND MEDICAL JOURNAL

The first French newspaper was founded in 1631 by Theophraste Renaudot a physician and great humanitarian Renaudot was graduated from the medical school at Montpellier in 1606 before he had reached his twentieth year He had inherited a considerable *fortune from his parents* "Recognizing the fact that a physician should be of a certain age before he can reasonably expect to command the confidence of his fellow men" Buck[1] says, "he decided to utilize the time following his graduation in visiting some of the more important capitals of Europe" Renaudot visited Italy Holland Belgium, Oxford and Cambridge and on his return to France took up the study of chemistry During his life in Paris he became aware of the terrible condition of the poor and looked about for some method of improving their condition but, all his efforts unavailing, he returned to his birthplace in Loudon While there he met an influential Capuchin monk who brought him to the notice of the great Cardinal Richelieu Regardless of the fact that Renaudot was of the Protestant faith he was able by his honesty and good presence to secure the strong support of the great cardinal, and shortly returned to Paris He now founded a central employment bureau for the employment of poor persons, where on payment of three sous any person might be registered and where employers might arrange to meet prospective employees, no charge being made in the case of a poor person As a further step, Renaudot ultimately organized a loan office with the motto, "Lend money without expectation of profit' the taxes on loans being fixed at 3 per cent His solution of the social problem was summed up in the aphorism In every organized community or state the rich shall afford aid to the poor all harmony between the two classes ceasing when one of them grows richer at the expense of the other" In the search for the source of socialism, this aphorism has perhaps been overlooked It is particularly interesting to read how the newspaper came to be founded It was issued first as an official sheet containing news received from the outside world, the king's edicts and treaties made with other nations Realizing how valuable such a paper might be for personal interests Richelieu strongly supported it and Louis XIII finally granted to Renaudot "the privilege to make print and sell through any agent whom he might select and wherever it seemed to him best to sell copies the news

1 Buck A H The Dawn of Modern [illegible] New Haven Yale University Press 1920

the official appointments and accounts of all events occurring both within and outside the kingdom" This paper, known as the *Gazette de France,* was first published in four pages to sell for half a sou One year later it was increased by four pages under the title *Nouvelles,* and the price increased to one sou It is reported to have been a brilliant success from the first day of its publication in 1640 After nine years, Renaudot changed its scope by adding to it the character of a medical journal, thus began the first French medical journal He continued to edit it as a medical journal until 1653 In 1640, he was permitted by the king to establish a bureau for the free treatment of the sick poor This was so well organized as to compare favorably with our modern free dispensaries In fact, this dispensary soon attracted many physicians and began to take on the character of a school for clinical instruction, at that time an entirely new feature In sketching the life of this French physician, Professor Buck has done a real service to the history of medicine It is rare that executive ability, humanitarian ideals and enterprising originality of the character which Renaudot displayed are combined with a scientific mind When the combination does occur the world profits

THE LIVER ESSENTIAL TO PROTEIN METABOLISM

The importance of the liver in the metabolism of protein in the body has been strikingly upheld by recent observations at the Hospital of the Rockefeller Institute for Medical Research in New York As there is convincing evidence that urea, the conspicuous end-product of nitrogenous metabolism, can be formed in tissues other than the liver, some doubt has arisen as to whether the hepatic function is, after all, as paramount in relation to the reactions ending in urea production as has been supposed There is reason to believe that amino-acids are the foremost representatives of disintegrating protein in the body The catabolism of protein therefore means primarily the breaking down of amino-acids It is accordingly conceivable that when this chemical disintegration is interfered with, free amino-acids will accumulate in the tissues and fluids, notably in the blood It does happen, in fact, that the blood sometimes is richer than normal in amino-acids Almost invariably, however, when this occurs other nitrogenous excretory substances, such as creatinin, uric acid and even urea, also accumulate in the blood, thereby indicating that it is an impaired and inadequate renal function rather than any insufficient metabolic activity which accounts for the undue amount of amino-acids detected at the moment In acute yellow atrophy of the liver, an extremely rapid autolysis of the tissue liberates amino-acids in enormous proportions According to analyses of Stadie and Van Slyke,[1] they may then appear in the blood to a degree unequaled in any other known condition The urea content of the blood is not thus enhanced, indicating that somehow the amino-acids are not being deaminated and converted into urea as readily and rapidly as they ought to be The amino-acids circulate and are excreted as such in unusual amounts The important fact is not merely the formation of amino-acids on a large scale This happens in other conditions of autolysis, for example, during resolution in pneumonia Urea is nevertheless formed readily, and amino-acids do not remain unconverted Tissue waste results in definitely increased excretion of amino-acids only when the destruction of the liver cells is almost complete, as in yellow atrophy In this disease, organ systems other than the liver are not prominently involved, if one may judge from histologic evidence Hence, as Stadie and Van Slyke observe, their analyses support the view that in the deamination of amino-acids and synthesis of urea the liver bears a part that cannot be entirely assumed by the rest of the body

1 Stadie W C and Van Slyke D D The Effect of Acute Yellow Atrophy on Metabolism and on the Composition of the Liver Arch Int Med 25 693 (June) 1920

DIETARY JUSTICE TO THE PEANUT

The statistics of the peanut crop in the United States attest the growing popularity of the product For many years peanuts were eaten essentially as "extra" foods, like candy and other sweetmeats Latterly, they have begun to claim a more substantial place in the diet Under the appealing designation of peanut "butter," the ground peanuts are finding widespread use as a palatable, wholesome food Peanut oil is now expressed in large quantities from shelled peanuts, and has received commendation From the resulting press cake, peanut flour has been prepared by grinding Peanuts are unusual in containing a considerable proportion of protein along with both fat and carbohydrate Water-soluble vitamin is also not lacking Experts in the Office of Home Economics at the U S Department of Agriculture [1] have shown that the nutrients of peanuts are easily digested by man Johns and Finks [2] of the same department have given an added worth to the food by demonstrating convincingly the high physiologic value of the peanut protein Various investigators have demonstrated that bread made from wheat flour of current composition is inadequate as the only source of protein in the diet The government workers have found, however, that bread made with a mixture of 25 parts of peanut flour and 75 parts of wheat flour furnished adequate proteins for normal growth of experimental animals The proteins of the peanut bread were utilized for gain almost twice as well as those contained in wheat bread This does not mean that the familiar "staff of life" should be abandoned or regularly diluted with peanut flour, it does, however, put a stamp of real nutritive merit on a food product that many a physician still thinks of solely in terms of a trouble maker for digestion

1 Holmes A D Bull 717 U S Dept Agric 1918
2 Johns C O and Finks A J Studies in Nutrition IV The Nutritive Value of Peanut Flour as a Supplement to Wheat Flour J Biol Chem 42 569 (July) 1920

Protection of Health and Life—As in the beginning, so now, and throughout all time the first business of government will be the protection of human health and life, and the government that discharges this, its first duty, will guarantee its own greatness and permanency through the development of a vigorous and happy citizenship—W S Rankin, *Tr Assn Life Ins Presidents* 1919

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION PUBLIC HEALTH ETC)

GEORGIA

Division Changes Name—The title of the Division of Rural Sanitation of the Georgia State Board of Health has been changed to that of Division of County Health Work

Full-Time Health Officers—On July 26 it was announced by the state department of health that twenty-five counties of the state have established county boards of health with full-time health officers in accordance with the provisions of the Ellis law The latest to establish county boards of health were Hall, Telfair, Jasper and Brooks counties

Health Centers Established—Health centers have been established at the Grady Hospital Clinic and at the Woman's Club Atlanta One is soon to be established in the Moreland Avenue School district and others will be opened later in other sections of the city all under the direction of the child welfare department of the state board of health, of which Dr Lydia A de Vilbiss is head

ILLINOIS

Personal—Dr John H Fulgham East St Louis has resigned as clinician for the East St Louis Tuberculosis Society——Dr Ora J Cubertson East St Louis, suffered burns on the face hands and arms from the explosion of a can of gasoline, August 3

Funds Sought for New Hospital—The Chicago Polyclinic after thirty-four years of service is preparing to launch a drive to collect funds for the purpose of erecting a hospital building The plan is to put up this building on land joining the present Henrotin Hospital and it is hoped to establish a modern hospital center in which all the health activities of that district will be housed

MARYLAND

New Standard for Ice Cream—Under a legislative act which went into effect June 1 ice cream is defined as a frozen product of cream and other milk substances containing not less than 8 per cent of butter fat Not exceeding 1 per cent of pure gelatin tragacanth or vegetable gum may be added

Last Health Lecture of Summer Series—The last public lecture of the summer series at the Johns Hopkins University was given on the closing day of the summer school by the director of the school of hygiene and public health Dr E V McCollum on "Nutrition as a Factor in Preventive Medicine" It was followed by a reception to all the students of the summer school at the civil engineering building

Investigation by Health Department—An investigation to determine the cause of an unusually large amount of dysentery in Baltimore this summer is under way at the health department Fifteen to twenty new cases have been reported in the last two days and the cooperation of physicians of the city has been asked to determine the exact type of the disease The death rate among babies under 2 years of age is suddenly increasing and nurses are looking into the cause Until last week the mortality among infants dropped as compared with 1919 Fifty infants died last week, twenty more than the same week a year ago

Personal—Dr John Jacob Abel professor of pharmacology at the Johns Hopkins University has been honored with the degree of Doctor of Laws by Cambridge University England Dr Abel is editor of the *Journal of Pharmacology and Experimental Therapeutics* and a member of the National Academy of Sciences——Dr Harry J Moss superintendent of the Hebrew Hospital Baltimore will sever his connection with that hospital in September to become superintendent of the Brownsville and East New York Hospital Brooklyn——Dr Howard A Kelly Baltimore who is spending the summer months at Indian Point on Ahmic Lake Ont. fell and broke his leg recently while alone in the Canadian woods——Dr D L Gifford Zion Cecil County who has been ill in a Philadelphia hospital for several months has returned to his home greatly improved in health——Dr Martin L Jarrett Jarrettsville is a patient at St Joseph's Hospital

Drive to Aid University Hospital.—Preparations for a statewide drive to raise funds for the university hospital were recently made at a meeting of the executive committee in charge of the campaign The drive will last eleven days beginning October 2 and ending at midnight October 12 The amount of money to be raised by the drive has not yet been determined but it is thought that it will exceed $500 000 This drive is one of the first undertakings attempted by the board of regents of the University of Maryland since the recent consolidation of the professional schools of the University of Maryland and the Maryland State College into a state university The vital problem of supplying the different hospitals in the city with nurses and homes for nurses was discussed as well as the need for more room for maternity cases in the hospitals It was decided that what was most needed by the university hospital and the city were a nurses' home and a maternity hospital There is a working agreement between the university hospital and the Johns Hopkins Hospital for the Broadway institution to take care of as many of the maternity cases east of the Fallsway as it can But it was pointed out that the hospitals in Baltimore can no longer handle all of these cases with their present facilities and a new maternity hospital is imperative The committee will also attempt to raise sufficient funds to enlarge the present accident service which now maintains a twenty-four hour service

MASSACHUSETTS

Rockefeller Foundation Appropriation—The Medical School of Harvard University has received $350 000 from the Rockefeller Foundation for the development of psychiatry and $300 000 for the development of the teaching of obstetric

Personal—Dr S Burt Wolbach of the Medical School of Harvard University who has been working abroad for six months in an effort to establish definitely the organism causing typhus fever has returned to the United States ——Cambridge University has conferred the degree of Doctor of Laws on Dr Harvey Cushing professor of surgery in the Medical School of Harvard University

Lepers to Be Returned for Further Treatment—The two lepers at the State Colony on Penninkese Island whose condition had shown such marked improvement that their provisional release was being considered are to be returned from Boston to the island Newspapers had reported them as cured and had stated that a new remedy for leprosy had been discovered The commission of physicians appointed by the state board of health reports as follows No open lesions in the throat or elsewhere were found on either both showed small nodules in the throat and soft palate presumably leprous with no tendency to ulceration scars were present in the nose and throat of both one had a nodule on the septum which which had healed one had a perforated septum was excised for examination (no report yet), both showed still some palpable enlargement of the ulnar nerves both showed no definite loss of sensation even over scarred areas both showed some possible diminution in the power of sensation on the forehead both gave positive Wassermann reactions both gave repeatedly abundant lepra bacilli on scarification of the mucous membrane of the septum of the nose and the lepra bacilli were not only abundant but were found in their characteristic roseate form of clustering the swab cultures from the nose without scarification were negative The board concluded to return them to the colony for further treatment Treatment had been by chaulmoogra oil as used in the Philippines that is given by mouth to the limit of tolerance and also administered in what is known as the C C R combination hypodermically——chaulmoogra oil camphor and resorcin Dr Frank H Parker is medical superintendent of the hospital

MINNESOTA

Personal—Dr Edward W Buckley St Paul has been made a Chevalier of the Legion of Honor on account of services rendered in France as an official of the Knights of Columbus

MISSISSIPPI

Sanitary Engineer Appointed—The state board of health has appointed Mr H A Kroeze as sanitary engineer Mr Kroeze has been assistant sanitary engineer for the Mississippi State Department of Health

Site for Home for Feebleminded [illegible] that he had of Ellisville for the [illegible] announced [illegible]

minded has been accepted The offer of Ellisville included $20 000 in cash and 2,570 acres of improved land with forty residences, worth at least $200,000

Health Teaching by Moving Pictures—Mr E G Pope, the director of health work in Granada County, has begun a series of lectures illustrated by moving pictures to further hygiene and sanitation He has two assistants, one of whom is a representative of the American Red Cross

Personal—Dr Bowman L Robinson Meridian was shot and seriously wounded by a negro with whom he had an altercation, July 18——Dr William A Carpenter Meridian, has resigned as health officer of Lauderdale County, and expects to move to Cleveland, Miss——Dr James H Fox, Jackson, has been appointed medical member of the state board of nurses, succeeding Dr Benson B Martin, Vicksburg——Dr Francis M Sheppard Richton has succeeded Dr Willis Walley who has resigned as superintendent of the State Charity Hospital, Jackson——Dr Augustine J Podesta has succeeded Dr J F Anderson as a member of the staff of the Natchez Charity Hospital and Dr E Floyd Brown has been elected medical director and manager of the hospital

NEW YORK

Almshouse Will Become Hospital—The Kings County Almshouse has been closed The buildings are to be renovated and fitted as a new hospital for chronic cases, the first institution of its kind administered by the city The department of public welfare explains that this step has been taken because of the great need for a hospital for chronic cases When ready for occupancy the Kings County Hospital will transfer about 600 chronic cases to the new institution Various forms of handicrafts will be taught the patients

Group Consultation Clinics for Rural New York—The *Bulletin* of the New York State Health Department for July announces that the department is planning a series of consultation clinics throughout the state Of the fifty-seven counties of the state, exclusive of greater New York twenty-one have no clinic or dispensary service of any sort and nine others have but one clinic each and that for a single specialty These group consultation clinics will be held in cooperation with physicians practicing in the smaller cities and rural communities and with health centers where such exist and will make available laboratory and other special facilities for diagnosis

Reconstruction Home for Crippled Children—An organization has been formed, several thousand dollars have been raised or pledged, and a house in Ithaca, formerly used as a private hospital, has been rented and equipped as a home for children who have been severely paralyzed as a result of poliomyelitis In some of the rural districts of the state, children who were paralyzed in 1916 at the time of the poliomyelitis epidemic, have reached an age when they should attend school, but owing to their disability it is impossible for them to attend local schools There has heretofore been no institution of this kind in the state The home was formally opened July 10, and can accommodate about twenty patients The orthopedic work of the home will be directed by the state orthopedic surgeon and the district nurse It is intended to make a charge for the maintenance and treatment of patients sufficient to make the institution self-supporting Patients will be admitted on equal terms from any part of the state

Personal—Dr Ethan A Nevin, Newark, has been elected president and Dr Charles H Bennett, Sodus vice president of the Wayne County Tuberculosis Committee——Dr Willis E Ford Utica was seriously injured, July 22, by a fall——Dr Clarence L Hyde announces his intention of resigning as superintendent of the J N Adam Memorial Hospital, Perrysburg to accept a position as superintendent of a hospital in Akron Ohio——Dr Hermann M Biggs, commissioner of health of New York state has been given the honorary degree of Doctor of Science by Harvard University in recognition of his work in combating tuberculosis——Dr Edward H Marsh Brooklyn consultant in venereal diseases state department of health, has been appointed assistant professor of hygiene and preventive medicine at Long Island Medical College——Dr Edward S Godfrey Jr, Albany has been appointed director of the division of communicable diseases of the state department of health——Morris Scherango, formerly head of the bacteriological department of the University of Kentucky has accepted the position of assistant bacteriologist in the state laboratory

New York City

Addition to Sanitary Code—The department of health at a recent meeting adopted a resolution regulating the sale of clinical thermometers and defining a clinical thermometer and fixing its accuracy

Addition to Hospital—The Jewish Memorial Hospital, formerly the Philanthropin Hospital has purchased the Inwood House at Two Hundred and Second Street and Broadway, and will renovate it so as to accommodate 150 patients The building is expected to be ready for occupancy June 1, 1921

Course of Study in Roentgenology—The *Bulletin* of the New York Association for Medical Education for July 15 announces that plans have been drawn up for a course of instruction in roentgenology, and that one of our universities has expressed a willingness to open and develop such a department A staff of roentgenologists have agreed to serve as a teaching body All that remains to be done in order to put the plan into effect is the provision of a comparatively small amount of money to purchase the equipment and start the work

Housing Shortage Overcrowds Institutions—The committee of the united hospital fund gives out figures showing that one reason for the increased use of hospital facilities lies in the housing crisis which makes it impossible for many families to care for their sick in cramped quarters The New York Post-Graduate Medical School and Hospital estimates that there are 25 per cent more private rooms in use today than at any time last year, while the general wards show the general enrolment The same condition prevails at the New York Mount Sinai Presbyterian, Nursery and Child's and Sloane hospitals There is said to be no increase in the sick rate of the city

Personal—Dr Otto V Huffman has resigned as a member of the faculty dean and acting provost of Long Island College Hospital Brooklyn, and has been appointed a member of the faculty of the New York Postgraduate College and Hospital and chief of the medical clinic——Edric Brooks Smith B S has been appointed business manager and Frederick Stanley Howe A B, assistant business manager of the Rockefeller Institute for Medical Research——Drs Simon Flexner and Alfred E Cohen of the Rockefeller Institute returned from Europe August 6——Thomas D Wood, director of the health council of the National Educational Association and chairman of the joint committee of the National Educational Association and of the American Medical Association on health problems in education was given a luncheon, July 8 at Salt Lake City as an expression of appreciation of his achievement in effecting a complete change in the attitude of educators toward health problems——Dr Emil F Hartung Brooklyn is seriously ill at his home as the result of injuries sustained in an encounter with robbers who called him to a rooming house on the pretext of sickness and robbed him $4 000 in jewelry and cash

NORTH CAROLINA

New Diagnostic Clinic—A diagnostic clinic has been opened at Raleigh by Drs Harold W Glascock Amzi J Ellington Ivan M Procter, Jr The Mary Elizabeth Hospital is operated in connection with the clinic

Personal—Dr Ben M Meriwether, Asheville, sustained a fracture of several ribs when his automobile ran off an embankment August 3——Dr Edward F Long Lexington has accepted a position as superintendent of public health for Wake County, including the city of Raleigh

OHIO

New Hospital—A new hospital is being erected at the Boys' Industrial School

New Venereal Clinic—A venereal disease clinic was opened at Fairview Hospital Cleveland August 1, under the supervision of the municipal division of health The clinic is open evenings under the charge of Drs Harry H Ward, Richard Dexter and Henry L Sanford

Health Bulletin to Be Issued—A monthly health bulletin is to be issued jointly by the health departments of Springfield and Clark County This month the bulletin will contain health data and will be a resume of the work of the health department It will be issued under the direction of Dr Rush R Richison, Springfield

MEDICAL NEWS

Academy Picnic—The annual picnic of the Academy of Medicine of Cleveland was held in conjunction with that of the Cleveland Dental Society and the Northern Ohio Druggists' Association at Port Stanley, Ont August 18 The principal address was delivered by Frederick L Hoffman LL D New York City, on 'Health Insurance'

Personal—Dr Thomas J Arundel Youngstown has had bestowed on him by the pope the decoration of the Gold Cross 'pro ecclesia et pontifice' for war service in Italy Dr Arundel served under the auspices of the Knights of Columbus and was active in war relief work in Paris before the armistice was signed after which he was sent to Rome

Citizens to Decide Hospital Issue—The board of commissioners of Montgomery County having considered a petition for a memorial hospital have decided to submit the issue o the voters It is said they are of the opinion that the building of another hospital at Crawfordsville in addition to the Culver Union Hospital might make the operation of both institutions unprofitable

PENNSYLVANIA

Licenses Revoked and Reinstated—The licenses of Dr Victor O Humphrey Port Allegany and Herbert L Lantz Wilkes-Barre are said to have been revoked, August 7 by the state bureau of medical education and licensure on account of drug addiction——The license of Dr Walter W Senn Williamsport, has been reinstated by the board

Personal—Dr Howard L Hull Camp Hill chief medical inspector of the state department of health has resigned—— Dr George K Strode West Chester chief of the division of school hygiene has resigned to become connected with research work with the Rockefeller Institute——Dr William L Estes for nearly forty years a practitioner of South Bethlehem, announces his retirement from the staff of St Lukes Hospital having reached the age limit of 75 years——Dr James P Sands has been provisionally appointed senior medical officer of the Philadelphia Hospital for Mental Diseases

TEXAS

Personal—State health officer Dr Charles W Goddard Austin is reported to be ill with malaria at his home

Hospital Under Construction—Work has been begun on a brick and tile building at Gonzales to be used as a hospital by Dr George Holmes

State Appropriation for New Hospital—The state legislature having appropriated $110 000 for a new hospital at the State Confederate Home at Austin it remains now for the state board of control to award a contract for construction

The Plague Situation—On August 17 the confirmation of the diagnosis of the eighth case of bubonic plague at Galveston was announced by the U S Public Health Service Another case is still under observation August 12 the fifth death from bubonic plague occurred at Beaumont where twelve cases have been reported

State Public Health Service Work—In a pamphlet sent to all parts of the state the Texas Public Health Association advocates a thorough physical examination once a year for every person in the state as an aid in the prevention and cure of tuberculosis The pamphlet tells the symptoms that would suggest tuberculosis and the means of its prevention During the last year the association distributed more than 1 000 000 pieces of literature in this propaganda

Indigent Migratory Consumptives—The Texas Public Health Association has issued a report on the indigent migratory consumptive problem The population of the community under discussion is approximately 16 000 and the statistics cover a period for one year from Sept 1 1918 During this period there were 208 deaths from the disease with a death rate of 1 300 per hundred thousand a little lower than the United States tuberculosis death rate at large Of the 208 eighty were caused by tuberculosis or a death rate in the community of 500 per hundred thousand This appears unfavorable when compared to the tuberculosis death rate of the United States which is 146 6 per hundred thousand and it is evident that the excess of the death rate was caused by the great number of tuberculous people migrating to Texas During the period covered by the survey a relief organization spent $1 128 70 on indigent tuberculosis sufferers and only forty had applied to the organization for aid Of the 193 persons interviewed seventy were single more than 37 per cent of he to al number were high class physicians professional men or workers in trades or skilled occupations 8.25 per cent had been farmers Of the number interviewed sixty three, or more than 32 5 per cent were in a precarious condition fifty-nine had been in other communities on account of the r health and sixty-four had had sanitorium treatment The conclusion is that the migratory tuberculosis problem is acute in the Southwest and it is recommended that studi of the problem be made in many communities throughout that territory so that there may be some basis on which to place a request for legislation to prevent the indigent migrator consumptives from entering the state or at least to provide care for them

UTAH

New Hospital Building—A new building for the State Mental Hospital is now in course of construction

Personal—Dr Hardy Carroll has been appointed medical supervisor of the Brigham Young University Provo

Sanatorium Burns—The Ogden Canyon Sanitarium was destroyed by fire August 2 Two persons were reported to be missing

Appropriation for Health Education—The Department of Hygiene and Preventive Medicine of the University of Utah Salt Lake City has secured a second appropriation of $12 000 from the Interdepartmental Social Hygiene Board, Washington, D C to carry on the work of the department in connection with the university and the state During the last year 294 public health lectures were delivered and the plans for service next year include a course of instruction in nursing and the standardization of training of nurses throughout the state

CANADA

Canadian Society of Anesthetists—The Canadian Society of Anesthetists was recently formed with Dr Samuel John ston Toronto as president The objects of the new society will be the promotion of the science practice and teaching of anesthesia Dr Wesley Bourne 34 Mark Street, Montreal is the secretary-treasurer

To Sell Arsphenamin—The Ontario government provincial laboratories have been manufacturing arsphenamin for some time past and now have a considerable stock on hand Under the law they are not permitted to sell it in the province of Ontario but it will be sold to other provinces at a reduction of from 25 to 30 per cent on the charges by wholesale firms It is further stipulated that it must be used for free treatment

Red Cross Scholarship Awarded—The Canadian Red Cross Society has awarded a scholarship of $1 500 in public health nursing to be held for one year at the University of London England to Miss Jean I Browne Regina Sask Miss Browne is an honor graduate of the Toronto Normal School and was also winner of the general proficiency scholarship in the Toronto General Hospital Training School for Nurses In 1911 she organized the health work of the Regina public schools and has been director of hygiene for the Department of Education of Saskatchewan since 1917

Personal—Major Gen Guy Carleton Jones C M G formerly director of medical services for Canada has let Ottawa and is at present residing in Italy——Sir William Smith head of the Royal Institute of Public Health of England, has arrived in New York on his way to Canada—— Dr William Boyd professor of pathology in the University of Manitoba, Winnipeg has declined the offer of the chair of pathology at the medical school Cairo Egypt——Dr John G Adami vice chancellor of the University of Liverpool and formerly professor of pathology and bacteriology in McGill University Faculty of Medicine has been elected an honorary fellow of Christ College Cambridge England

Fighting Venereal Diseases—Miss Violet Trench at a recent banquet tendered her in Toronto by the Canadian National Council for Combating Venereal Diseases at which Dr Frederick W Marlow Toronto presided related the beginning of the British National Council for similar purposes Miss Trench said that condemnation led to concealment, and that the presence of disease does not prove guilt The unequal standard in the sexes is a lie The standard which is the right of every human being and one lived up to by many men and women is the standard of absolute chastity before marriage and absolute faithfulness after marriage

Hospital News—Although there are approximately 2 500 men contributing to the maintenance of the Cobalt Hospital Cobalt Ont during the last week of July there

not a single patient in that institution, the first time in the history of the hospital that neither a case of accident nor of illness has occurred——The Cochrane Hospital in New Ontario, The Lady Minto Hospital, is faced with a new problem—the problem of obtaining nurses The Victorian Order of Nurses at Ottawa is under agreement to supply a staff of nurses but has not been able to supply the demand The Sisters of Providence offer to purchase the building and operate he hospital as a general hospital, but under the terms by which the hospital was established in 1911 it was to be conducted free from any religious or denominational control——Freeport Hospital, Kitchener, Ont, which has been under the direction of the Military Hospitals Commission, will be vacated by the commission and its staff by the end of August It will be turned into a hospital for patients suffering from consumption and will be known as the Waterloo County Sanatorium

GENERAL

Problem of the Deaf Child—The American Association to Promote the Teaching of Speech to the Deaf has adopted resolutions to the effect that it has heard with pleasure of the interest of the American Medical Association in the problem of the deaf child and requests the assistance of the Association in all its efforts to reach a special solution of these problems

Registration of Vital Statistics—The National Conference of Commissioners on Uniform State Laws was in session in St Louis, August 2, and considered the report of the Committee on Vital Statistics of which Col Nathan William MacChesney, Chicago, is chairman The commission is considering a draft of a uniform law governing the registration of all vital statistics

Bequests and Donations—The following bequests and donations have recently been announced

To establish a hospital at Fairfax S C the bulk of the estate estimated at more than $300 000 by the will of Dr William J Young Fairfax

City Hospital Indianapolis and Witham Memorial Hospital Lebanon Ind, each $10 000 by the will of James Alexis Lane

St Margaret Memorial Hospital Pittsburgh $10 000 by the will of Charles H Spang $5 000 by the will of J W Paul and $500 by the will of James N Cooke

Preacher Becomes Healer—An authentic report states that a Rev J J Ramsey appeared recently at Boca Grande, Fla, and, without first securing a license, announced himself as an M D and began to practice He claimed graduation from the Eclectic Medical University of Kansas City, Mo, but a report from the officers of that school declares he had attended only one session There is no record of his having graduated from any medical school or having received a license to practice in any state Following inquiry in regard to him, he is said to have left Florida for Chicago

Conferences on Tuberculosis—The Northwestern Conference on Tuberculosis will be held at Cheyenne, Wyo, September 9 to 13——The eighth session of the Mississippi Valley Conference on Tuberculosis will be held in Duluth, Minn, September 2 to 4 The work of the conference will include on the first day a general session, on the second day, work in the sociologic clinical, and nurses sections, and the Mississippi Valley Sanatorium Association and on the third day a summing up together with special features such as a children's pageant and other entertainments

Attempts to Defraud Physicians—A person calling himself Dr C Benjamin Schoenfeld" is reported in January 1920 to have been calling on various physicians in California claiming that he was a registered physician, and that he represented fifty or more manufacturers, and endeavoring to secure $20 as a fee for a bonding company In May, 1920, a San Francisco paper reported that Dr C B Schoenfeld, an osteopath was held on a charge of attempting to pass a fraudulent check for $20 In June, 1920 according to a report Dr C H Schoenfeld was arrested at Sacramento for passing bad checks It is stated also he is wanted for embezzlement in Berkeley and San Francisco His whereabouts, at present, are unknown He has evidently gone elsewhere to further impose on the medical profession

Chairmen Elected—The National Research Council elected the following chairmen of some of its scientific divisions for the year beginning July 1, 1920 division of educational relations Vernon Kellogg professor of entomology Stanford University and permanent secretary of the National Research Council, division of physical sciences, Augustus Trowbridge, professor of physics Princeton University, division of chemistry and chemical technology Frederick G Cottrell, director of the Bureau of Mines, division of medical sciences, Surg George W McCoy, U S P H S, director of the U S Hygienic Laboratory since 1915, division of biology and agriculture, C E McClung, professor of zoology, University of Pennsylvania, and division of anthropology and psychology, Clark Wissler, curator of anthropology, American Museum of Natural History, New York City

Industrial Surgeons to Meet—The officers and board of directors of the American Association of Industrial Surgeons have called a midyear meeting of the association to be held in conjunction with the health service section of the Nations' Safety Council at Milwaukee, September 28 and 29, under he presidency of Dr Otto P Geier, Cincinnati On the first day, Dr Harry E Mock, Chicago, will speak on "Preventive Medicine and Surgery in Industry" On the second morning the president will deliver the annual address on "The Future of Industrial Medicine and Surgery," and Dr William S O Neill Sherman, Pittsburgh, will read a paper on 'Industrial Surgery" On the afternoon of the second day Dr Amos W Colcord, Clairton, Pa will speak on "The Physical Examination of Employees"

Better Conditions for Children—A striking development in the movement to obtain better conditions for children is described in a pamphlet issued by the Children's Bureau of the United States Department of Labor entitled "State Commissions for the Study and Revision of Child Welfare Laws" Nine years ago, Ohio appointed the first commission to study conditions surrounding children in the state, and to codify and revise laws relating to children Since that time, sixteen other states and the District of Columbia have appointed similar commissions and almost two thirds of the states have now taken some definite action toward state legislation as it affects children In almost every one of these states a carefully planned educational campaign has been carried on covering the safeguarding of health school attendance regulation of employment, protection against exploitation or corruption of morals special provision and training of dependent and neglected children, methods of dealing with delinquent children and the state supervision of agencies and institutions

Hospital Association to Meet at Montreal—The twenty-second annual conference of the American Hospital Association will be held at Montreal October 4 to 8 Each of the sections on dispensaries, social service, nursing, hospital construction and hospital administration has a special program The discussions will cover hospital problems that exist in both large and small hospitals In connection with the meeting there will be reports from the American Conference on Hospital Service and also from committees studying the nursing problem as well as from the committee studying hospital social service The Social Service Section will have the cooperation of the American Association of Hospital Social Service Workers A model venereal disease clinic will be held through the cooperation of the Division of Venereal Diseases of the U S Public Health Service The United States government is sending a physician nurse and technician trained in this work Hotel reservations may be arranged through Mr H E Webster chairman of the local committee, Royal Victoria Hospital, Montreal Inquiries of a general nature should be addressed to Dr A R Warner, executive secretary of the American Hospital Association, 22 East Ontario Street, Chicago

LATIN AMERICA

Section on Psychiatry in Uruguay—The Medical Association of Uruguay has recently added a section on psychiatry, the chairman of which will be Dr B Etchepare

Uruguayan Physician in the United States—Dr Pedro I Martino of Montevideo Uruguay is in the United States visiting otorhinolaryngologic and pediatric clinics

Medical Society of Cartagena—The Academia de Medicina de Cartagena has recently elected the following officers president Dr Manuel F Obregon, vice president, Dr Constantino Pareja treasurer Dr Miguel A Valiente, librarian, Dr Jose A Caballero, secretary, Dr Manuel Ramon Pareja, editor Dr Nicolas M Paz

Ciudad-Bolívar Medical Society Election—The officials recently elected for a two year term by the Sociedad de Medicos de Ciudad Bolivar Venezuela, include Dr A Bello, president, Dr P H Carranza vice president, Dr R Velasquez Marquez treasurer and Dr M F Flores librarian with Dr C E Salom secretary, and Dr J M Agosto Mendez, editor of the *Gaceta Medica*, now in its sixth year, published by the society

FOREIGN

Personal—Dr Richard A Berry professor of anatomy in the University of Melbourne has been appointed Stewart lecturer in that institution

Appropriation for Experimental Work—The Prussian Academy of Science has granted Dr Agnes Bluhm an appropriation of 1 000 marks to continue her experimental work on problems of heredity

Fined for Refusing to Wear Mask During Influenza Epidemic—The *Policlinico* relates that Dr Fox a physician at Glebe Australia has been fined 250 pounds sterling because he refused to wear the protecting mask during the epidemic of influenza

Tribute to Bajardi—On the occasion of the retirement of Prof D Bajardi from the chair of surgery at the University of Turin, on account of having reached the age limit a bronze portrait tablet was unveiled with much ceremony in the hall of the institute for surgical pathology

Lectures to Be Delivered—The Harveian Oration of the Royal College of Physicians of London will be delivered by Sir Frederick Andrews October 18 the Horace Dobell lecture by Sir William Leishman November 2 the Bradshaw lecture, by Dr C B Wall and the FitzPatrick lectures on the history of medicine by Dr E T Browne of Pembroke College Cambridge November 9 and 11

Scarcity of Nurses in Calais—The *Vie medicale* states that the municipality of Calais has appealed to the Roman Catholic nuns who were discharged from a leading hospital fifteen years ago when the authorities 'laicized the hospital service They are now asked to return to take charge of the nursing service as it is impossible to obtain sufficient lay nurses The scarcity is so great that there is scarcely any night service at all in the hospital

Restoration of Libraries of Serbia—A subcommittee of the society on 'Intellectual Relations with the Southern Slavs is making a special appeal for donations of good books in good condition to aid in the reconstruction of the libraries of Belgrade and other towns in Serbia The University of Belgrade contained the best library in the Balkans and the most complete collection of literature on the Balkans but in the last invasion of Serbia during the World War this collection was pillaged and destroyed A medical faculty is being organized at the University of Belgrade and foreign medical and biologic works would prove especially valuable

Classification of Professors by Seniority—Professors of the Paris Faculty of Medicine have been placed in two classes according to seniority those in the first class receiving a salary of 25 000 francs and those in the second class a salary of 23,000 francs By a recent ministerial decree Professors Richet, Pouchet Hutinel De Lapersonne Gilbert Roger Nicolas, Ribemont-Dessaignes Quenu Prenant Widal Chauffard and Weiss have been put in the first class and Professors Delbet Marfan Hartmann Bar Marie Broca Teissier Desgres Lejars Achard Robin Legueu Leculle Couvelaire Carnot Besançon Vaquez Dupre and Jeanselme in the second class

Prize for Means to Disinfect Tuberculous Sputum—The German Antituberculosis Society offers a prize of 3 000 marks for a new and superior method for disinfecting the sputum of the tuberculous effectual inexpensive and easy to apply particularly in the home The announcement of the offer states that none of the methods now in vogue answer all these requirements for home use The competing articles must be addressed Preisbewerb betreffend Auswurfsdesinfektion (with a mark the name in a sealed envelop) and be sent to the Geschäftsstelle des Deutschen Zentralkomitees zur Bekämpfung der Tuberkulose Berlin W 9 Konigin-Augusta Str 7 before March 31 1921

Questionnaire on Venereal Diseases in Switzerland.—The Swiss Society for the Repression of the Spread of Venereal Diseases has appealed to the profession throughout the country to compile data on the prevalence of these diseases as a basis for prophylaxis and treatment The society has already established numerous centers for propaganda and advice A number of blank forms are to be sent to every physician and 50 centimes will be paid for each one filled out and returned to the society The period of observation is to be from Oct 1 1920 to Sept 30 1921 The appeal is signed by the federal service for public hygiene and the Commission medicale suisse as well as by the special society The last few years have witnessed such a flaring up of venereal diseases that it is hoped no one will prove indifferent to the appeal as in years past

Cows Being Sent to Germany—The *Deutsche medizinische Wochenschrift* for July 22 states that the plan of Germans to send to the fatherland 100 000 milch cows to restock the dairy farms is on the point of being realized The German agent in London Sthamer has notified the officials of the maritime service of the reparation commission that the American Dairy Cattle Company at Chicago is holding several thousands of milch cows presumably 100 000 with the requisite fodder ready to deliver to the German authorities in charge of relief Germany has to provide transport at once for the cows and in order to avoid losses it should be concluded before cold weather As the German government has no means for transporting the cattle Sthamer appeals to the reparation commission of the Red Cross at Berlin

The Problem of 'Restoration of Youth'—Referring to the work of Professor Steinach of the Vienna Biologic Institute described in the Vienna Letter in THE JOURNAL of August 14 p 490 our German exchanges state that Steinach's first report on the subject was presented to the Vienna Academy of Science Dec 5 1912 but he refrained from publishing it until he was absolutely certain of the results He now publishes it he says offering it without scruples to specialists and medical circles in general The aim is to prevent the escape of the testicular secretion from one of the testicles and for this the ligation is between the testicle and the head of the epididymis two ligatures being thrown around the entire bunch of efferent ductules and they are severed between the ligatures Roux of Halle explains in the current *Munchener medizinische Wochenschrift* p 918 the exact technic adding that it is possible that the products formed in the resulting acute degeneration of the tubuli seminiferi may cooperate in the effect The *Medizinische Klinik* comments editorially that the specific phenomena were observed in only a relatively small proportion of the surviving animals but adds that in the three clinical cases (mentioned in the Vienna Letter) the Steinach operation was done without the patient's knowledge during some operation for another purpose so that suggestion could not have been a factor Steinach's pamphlet is entitled Verjungung durch experimentelle Neubelebung der alternden Pubertätsdrüse" and is published by Julius Springer of Berlin

Standardization of Artificial Limbs—For more than three years the Ministry of Pensions London have had under consideration the standardization of the types of artificial legs supplied to pensioners the object being to facilitate repair and replacement Work on this standardization was carried out last summer by a committee under the chairmanship of Admiral Sir Reginald Bacon and completed by the ministers advisers Sir Charles Kenderdine KBE director of artificial limb supplies Mr T H Openshaw CB CMG MS FRCS Mr L Muirhead Little FRCS Mr Michael Longridge Elmslie CBE MS FRCS Mr R C CBE past president of the Institution of Mechanical Engineers and Mr A D Bailey technical adviser to the Ministry of Pensions The specifications for these standard limbs have now been approved by the advisory council to the ministry and Col Sir Lisle Webb KBE CB CMG director general of medical services In a few months all artificial legs of wood or leather supplied to pensioners will comply with the new specifications The method adopted has been to standardize the mechanism of the limb and the metal component parts leaving the actual limb to be fitted to an individual for the individual pensioner by the limbmaker The assembled for the individual needs of the man Standardization is not to be allowed to interfere with progress latter point is of great importance as every limb must necessarily be adapted to the individual of those types of limbs which have been is a standardization thoroughly and extensively tested and of which about 35 00 have been issued Further improvements will be made and the types will be modified as these are tested and proved The ministry have had in hand the problem of providing a lighter artificial leg made of metal instead of wood and leather and one type of this light limb has now received the approval of the advisers Light limbs have evident advantages for certain cases The pattern now approved will it is hoped be capable of being made by an engineering firm in such a way that only the actual fitting to the man need be carried out by a skilled limb fitter

Deaths in Other Countries

Dr G Calderini, professor emeritus of obstetrics and gynecology at the University of Bologna—**Dr F Paladino** of Palermo victim of an assassin—**Dr G Barricelli** formerly president of the Italian Association of Health Officers and vice president of the Red Cross [illegible] Dr [illegible] Alsberg Cassel, Germany a war [illegible]

Government Services

Removal of the Headquarters of the Surgeon-General

The office headquarters of Surg-Gen M W Ireland of the War Department has been moved to the Munitions Building, Nineteenth and B Streets N W

War Risk Insurance Hospitals

Assistant Surg-Gen W G Stimpson of the Public Health Service is making a tour through the Central Western states to investigate the need for additional hospital facilities for disabled and discharged soldiers The itinerary of the trip includes Chicago St Louis San Francisco and other points on the Pacific Coast

France Honors Dr Judd

July 14, in the presence of the governor of Hawaii and others, Dr James Robert Judd, Honolulu, received from the hands of Dr Augustus Marques, consul for the French Republic, the decoration of the Legion of Honor of the French Republic on account of his services in two hospitals in France both before and after the United States entered the World War

Immigration and the Public Health

A return of immigration to prewar proportions entails a largely increased amount of work in the medical inspection of immigrants by officers of the Public Health Service At the ports of New York Philadelphia Boston and elsewhere, special precautions are being taken to prevent the introduction of typhus fever and other epidemic diseases now prevalent abroad

Distinguished Service Medals Awarded

The United States government has awarded the Distinguished Service Medal to the following French medical officers for especially meritorious and distinguished service which was of great consequence to the American Expeditionary Forces Major-Gen Alexandre Bernard Lasnet, medical inspector, French army, Brig-Gen Jean François Pouy, medical inspector, Gen Jules F L Rouget, medical inspector, Prof R Roux medical inspector and director of Pasteur Institute in France, Prof T Tuffier medical inspector and M Wyssmans——Lieut-Col Richard Derby, M C, U S Army, has been awarded the Distinguished Service Medal "As sanitary inspector of the Second Division, and in charge of the front-line hospitalization and evacuation of the wounded during the active operations of the division in the Marne area, and later as division surgeon during the Meuse-Argonne offensive he demonstrated high professional attainments excellent judgment and gallantry in the execution of his important duties Due to his energy, the sanitary units under his control were amply provided with facilities for the proper care of the sick and wounded in the field He has given services of significant worth to the A E F"

Conference on Venereal Diseases

The program for the All-American Conference on Venereal Diseases under the auspices of the U S Interdepartmental Social Hygiene Board U S Public Health Service American Red Cross and American Social Hygiene Association, to be held in Washington, D C, Dec 6-11, 1920, includes discussion of the problems relating to medical investigations, to education as a means of controlling venereal diseases, to law enforcement and protective social measures with individuals and problems relating to social influences in the control of venereal diseases Administration measures of control will be discussed widely and will include the measures adopted and enforced by federal state and local governments in the United States, Canada Latin America and other countries of the world The officers of the conference are Dr William H Welch, Baltimore, president, Mr John Poole, Washington, D C treasurer, and Drs Thomas Storey, U S Interdepartmental Social Hygiene Board, C C Pierce, U S Public Health Service, Livingston Farrand American Red Cross, and William F Snow American Social Hygiene Association, administrative committee

Foreign Letters

PARIS

(From Our Regular Correspondent)

Aug 6, 1920

Public Hygiene and the League of Nations

The Council of the League of Nations recently discussed the report of M da Cunha, delegate from Brazil, on the formation of an international organization of hygiene as provided by the treaty of Versailles The purpose of this organization is principally to advise the League of Nations in matters of hygiene, to communicate promptly recommendations designed to combat epidemics and diseases in general, to conclude international agreements bearing on hygiene and to revise existing treaties, to protect the workingman and to cooperate in this endeavor with the international labor organization and the Red Cross, and to organize medical missions on the demand of the League of Nations This constitutes, in fact an amplification of the first Office international de l'hygiene publique, which was created by a conference held in Rome in 1907 and an adaptation of the latter organization to the League of Nations

The new organization will be formed (1) of a general committee of survey composed of the delegates of all the states which adhered to the Rome conference in 1907, (2) of a permanent committee consisting only of delegates of countries represented in the Council of the League of Nations, and (3) of a secretarial office The permanent committee will consider all projects which will be submitted to the approval of the general committee, and the latter will transmit the proposals to the respective governments who will have final decision in all matters The expenses of this new organization will be borne by the general budget of the League of Nations

The Dangers of Table Salt

Professor Rappin director of the Pasteur Institute of Nantes, recently read an interesting paper on the subject of The Dangers of Table Salt, at a meeting of the Association française pour l'avancement des sciences, just held at Strasbourg Table salt can become the starting point of dangerous changes and fermentative processes, not only in industrial food establishments but even in the kitchen itself Salt does not inhibit the vitality of micro-organisms for the destruction of which it has been commonly used. Collected in a careless way without special precautions from mines and salt marshes, salt contains a great number of micro organisms capable of jeopardizing the keeping qualities of foods to which it is added for the purpose of preservation Experiments show that the anthrax bacillus resists the action of a saturated solution of salt for two days, the erysipelas bacillus and streptococcus survive after twenty days' immersion the typhoid bacillus and the staphylococcus resist for five months, the diphtheria bacillus remains active after three weeks, and the tuberculosis bacillus even after three months Only the colon bacillus and cholera vibrio seem to be more vulnerable

Even after cleansing in the ordinary processes of refining, salt contains quite a number of micro-organisms Rappin

has found, for instance in a gram of salt from 1,300 to 38,000 bacteria and from 100 to 400 fungi These figures are considerably greater if the examination is made on dirty or crude salt, and such salt was found to contain between 6,000 and 51,000 bacteria per gram and, in several instances, between 76,000 and 300 000, with the content of fungi varying between 150 and 700 Brines, prepared for pickling contain even more micro-organisms In a sample of pork brine prepared two months before, the number of colonies on the eighth day reached a total of 960,612 per cubic centimeter Professor Rappin thinks there is no doubt that when food industries use such dirty salt for example, for butter and cheese, they invite serious mishaps From the point of view of hygiene, then, it would be desirable to employ in preservation of food products no salt that has not been purified and divested of all bacterial contamination

Centenary of the Academy of Medicine

The Academie de medecine will celebrate its centenary in December next and on this occasion Professors Chauffard, Delorme, Pinard, Vaillard, Camus, Meillere and Henriot will recount the work of the academy from 1820 to 1920 Moreover, Dr Paul Richer, member of the Academie de medecine and of the Academie des Beaux-Arts has just engraved a beautiful commemorative medal

Amebic Dysentery in France

Although before the war, amebic dysentery was rarely seen in France, the situation has completely changed since then, a fact to which Dr Marcel Labbe recently called special attention Dr Labbe attributes this change to the following causes 1 A great number of French soldiers on duty with the forces in the Orient returned in an infected condition 2 Colonial troops on duty in Europe brought dysentery with them 3 Systematic examination of the stools has led to the disclosure of isolated and autochthonous cases, probably of long standing, in various districts Be that as it may, amebic dysentery represents today an infection to be reckoned with in France, being found even among elements of Parisian society the members of which have never been in the colonies and have not come in contact with colonial troops Besides this, it is probable that the war has favored dissemination of the disease through the agency of discharged soldiers acting as carriers of the amebae and that the foci of amebiasis established in city and country will continue to multiply It becomes the concern of individuals and of society in general, then, to ferret out these foci promptly

LONDON

(*From Our Regular Correspondent*)

July 30 1920

Vital Statistics for 1918

The report on the vital statistics of England and Wales in 1918 has recently been issued by the registrar-general, Sir Bernard Mallet The year was extraordinarily healthy, notwithstanding the exceptional prevalence of influenza toward its close The civilian deaths numbered 587,828 a rate of 17 6 per thousand of the estimated population, which rate is reduced to 17 1 by correction for age distribution of the living The extent of the reduction was increased during the war by the withdrawal from the civilian population of men at an age when mortality is below the general average But this effect has been masked by the high influenza mortality of 1918 which occurred at these ages Of the total deaths, only 10 5 per cent were those of infants under 1 This is by far the lowest rate of infant mortality recorded the percentage so recently as 1901-1910 having been 22 6 The change is partly due to increased influenza fatality at the higher ages, but mainly to the rapid fall of infant mortality, and to reduction in births In terms of total births, infant mortality in 1918 was equal to 97 per thousand or 9 3 per cent below the average in the ten preceding years It is one of the lowest rates on record, only three previous years having infantile mortality of less than 100 to 1 000 births The provisional figures for 1919 show a rate of 89 per thousand or 2 per thousand below that of 1916 the lowest rate yet attained The comparison, however, is affected by the fact that in 1916 the birth rate was falling, while in 1919 it was rising, and when the necessary allowance has been made for these movements the rates for the two years appear to be about equal

As compared with the preceding year typhoid, measles and diarrhea showed a lower mortality while scarlet fever diphtheria and whooping cough showed a higher The deaths from typhoid numbered 950 of which sixty-five occurred among noncivilians The resultant mortality, 26 per million living, is the lowest ever recorded in this country To some extent the fall is due to absence, on foreign service, of a large number of men of the ages at which typhoid mortality is highest The remarkable fall from 300 deaths per million living in 1869 to 26 in 1918 may be followed in a new table which indicates that the loss of life from this disease is now only one third of what it was even ten years ago The disease is rapidly losing its significance as a cause of death in this country

The influenza epidemic which commenced about midsummer in 1918 increased the deaths from this cause from 5 000 to 10 000 usually recorded in a year to no fewer than 112 329, the death rate being 3 129 per million living In addition the epidemic led to a large increase in the loss of life assigned to diseases of the lungs including tuberculosis The total deaths attributable to influenza have been estimated at 132 000

Tuberculosis in its various forms accounted for 58,073 deaths, or 2,139 more than the previous year The mortality among the civilian population amounted to 1 694 per million a figure in excess of that recorded for any year since 1904 The increase was probably due to the epidemic of influenza, had it not been for which the tuberculosis mortality would probably have shown some reduction on that of 1917 The mortality from influenza among sufferers from phthisis greatly exceeded that of the general community A remarkable increase in deaths from tuberculosis in lunatic asylums has been continued throughout 1918, when the fatal cases amounted to 5,605, against 4,189 in the previous year, and an average of 1,800 in the three years 1912-1914 This increase has occurred notwithstanding a decline in the number of inmates It is ascribed mainly to reduction in quantity and deterioration in quality of food (particularly flour) Other causes of a secondary importance are deterioration of the asylum staffs and want of space for isolation, owing to the evacuation of some asylum buildings for war purposes and consequent congestion of the remainder Cancer mortality if stated in the form of an ordinary crude death rate was higher than in any other year, but if comparison is made by means of standard rates which allow for the abnormal age constitution of the male civilian population, there is an appreciable decrease from the previous years record

The Influenza Pandemic in India

The report of Lieutenant-Colonel Forster of the Indian Medical Service, sanitary commissioner for the Punjab which contains an estimated population of 20 000 000 gives a graphic account of the ravages of the pandemic of influenza in 1918 The death rate of the province rose to 81 per thousand the highest recorded since 1867 The excess was entirely due to influenza As occurred in England, the disease selected

adults for its victims and was complicated by a peculiarly fatal type of pneumonia From October 15 to November 8, the state of the province was such as to defy adequate description The hospitals were choked so that it was impossible to remove the dead quickly enough to make room for the dying, the streets and lanes of the cities were littered with dead and dying people, the postal and telegraph services were completely disorganized, the train service continued, but at all the principal stations dead and dying people were being removed from the trains, the burning ghats and burial grounds were literally swamped with corpses, while an even greater number awaited removal, the depleted medical service, itself sorely stricken by the epidemic, was incapable of dealing with more than a minute fraction of the sickness, nearly every household was lamenting a death and terror and confusion reigned everywhere The great malaria epidemic of 1908 and the worst years of plague fade into insignificance beside this epidemic, which in three months, October-December, killed 962 937 people This mortality is equivalent to 45 8 per thousand of the estimated population The European population escaped lightly Among commissioned officers and their families and for Europeans generally, the mortality was trifling, well under 5 per cent of the cases For the Indian population of the better class and among those provided with medical aid, it is estimated at about 6 per cent , among the poorer classes "anything from 50 per cent upward" Among the jail population in the province there were 4,475 cases and 520 deaths from influenza, giving a case mortality of 11 6 per cent Rural areas suffered more than the towns, this being due to the two circumstances that for practical purposes the rural areas even in normal times are without qualified medical aid and the rural population is unable to benefit from communal effort—itself energized by competent directing authority—to anything like the same extent as the urban population

Increased Workmen's Compensation

The workmen's compensation act of 1906 rendered employers liable to pay compensation for injuries to workmen arising in or out of their employment A committee appointed by the government has recommended large increases, which will no doubt be adopted, and also state supervision of the rates charged by insurance companies with a view of restriction of their profits Not more than 30 per cent of the premium income is to be expended in profits, management expenses and commission Insurance, which was previously optional, is with certain exceptions made compulsory on employers It is proposed to bring within the scope of the act large new classes of persons 1 Persons employed otherwise than by way of manual labor whose remuneration is at a rate not exceeding $1 750 a year instead of $1 250 under the existing act 2 Casual employment for the purpose of any game or recreation when the persons employed are engaged or paid through a club Otherwise casual employment is to remain as at present 3 Taxicab drivers who on the ground that they are the bailees of their cabs rather than the servants of the cabowner are at present excluded 4 Shore fishermen employed in the trawler industry 5 Shore fishermen employed in the herring or other fishery to be brought within the act by order of the commissioner, if he is satisfied after public inquiry that they ought to be included 6 All persons ordinarily resident in this country who are employed or are traveling in the course of their employment in a British ship -

Benefits are to be much increased In fatal cases the benefits for total dependents are to be on the following scale 1 When a widow is left $1,250 2 When the person killed leaves a child or children a weekly allowance of $2 50 for the first, $1.75 for the second and $1 50 for every other child The allowances are to be provided by the payment by the employer into a central fund of $2 500 in every case of a workman's dying and leaving a child or children under 15 years of age 3 When other dependents are left, in addition to the benefits mentioned above a further sum of $2,500 4 When dependents are left, not including widow or children, $1 250 The maximum liability for compensation in respect of a workman's death will thus be $4,000, which compares with a present maximum of $1 500 The provision for investing money for children is new In the case of partial dependents a sum representing the value of the late workmen's contributions to the support of the partial dependents shall be payable with a maximum of $1 250 Burial and medical expenses are to be increased to $75 The original maximum benefit payable in the cases of total incapacity was $5 a week In September, 1917 this was raised to $6 at which rate it was continued until the end of 1919 January 1 last the maximum became $9 It is now proposed that the total payment shall be 66⅔ per cent of the average weekly earnings, with a maximum of $15 In the event of partial incapacity, payment is to be on the basis of two thirds of the difference between the average weekly earnings before the accident and the average amount the workman is earning or is able to earn in some suitable employment after the accident Provision is also made that when the workmen can show that the rate of wages generally paid by employers to workmen in that occupation in the district at the time of his accident has at any time thereafter increased by upward of 20 per cent he is at liberty to claim compensation on the basis of the difference between what he is at present earning or able to earn and what he would at that time have been earning or able to earn had he received the benefit of such rise, the employer to be entitled to make a corresponding application for reduction in respect of a wage decrease Any medical and surgical aid necessary in addition to the medical treatment already available under the national health insurance acts is to be provided for the injured workman at the cost of the employer under a comprehensive scheme to be worked out by the proposed commissioner in cooperation with the ministry of health

The American Hospital in London

Considerable progress has been made in establishing the American Hospital in London mentioned in previous letters The hospital will be incorporated under the laws of the state of New York, and a campaign will be opened to raise an endowment fund of several million dollars The American Hospital will give medical aid by modern American and British methods irrespective of nationality or creed It will act as the American headquarters in Europe for all Americans who seek a further and specialized medical education overseas The plans of the building include laboratories libraries and other facilities for graduate medical study, with conference and lecture halls The hospital will be managed by joint American and British committees but the London council of management will consist as to three fourths of its members of American citizens The presidency in the United States has been accepted by Hon William H Taft, the Earl of Reading having consented to act as president in this country The board of governors includes the best known members of the American colony in London Two medical committees have been appointed to act in each country That in the United States consists of Drs G W Crile, W J Mayo C H Mayo A J Ochsner, Rudolph Matas and Franklin Martin This committee will have the duty of nominating the American members of the staff and will work in close conjunction with the English medical committee consisting of Sir Arbuthnot Lane, Sir Humphry Rolleston Sir John Bland-Sutton, Sir John Y MacAlister and Mr Philip Franklin

The Imperial Entomological Conference

Under government auspices the Imperial Entomological Conference consisting of delegates from various parts of the British Empire, has met in London The subjects for discussion were mainly economic 'Legislation in Regard to Plant Pests in the British Empire," "Cotton Pests," Organization of Entomological Work in the Sudan," The Education of Economic Entomologists," 'The Tsetse-Fly Problem" 'Resistance of Plants to Insect Attacks," 'Insect Pests of British Guiana," 'Insect Pests of Trinidad," "Artificial versus Natural Methods of Control of Insect Pests," and "Insects in Relation to Afforestation' The conference has arisen in connection with the Imperial Bureau of Entomology, which was founded by the Colonial Office at the beginning of the century It was decided that representatives from all places where economic entomology is studied should be invited to attend a periodic meeting in London The bureau is financed by the various governments who contribute annually sums of money ranging from $2,500 a year from the home government, Canada, India and Nigeria, down to $125 a year from the Seychelles and Newfoundland, and $100 from Malta

The bureau issues two quite important publications The first is the *Review of Applied Entomology,* a monthly periodical divided into Series A and B the former dealing with plant injuries caused by insects, the latter with insects harmful to man and domestic animals This review contains abstracts from current literature from all parts of the world and forms a very complete survey of applied entomology throughout the world By it, medical officers veterinary surgeons and entomologists in the remotest outposts of the empire are informed of the latest developments in their subjects The bureau also publishes the *Bulletin of Entomological Research* This consists largely of papers founded on the material sent home from the numerous collectors, and papers, chiefly of a systematic and bionomic character, contributed by various zoologists and other investigators Perhaps the most important work the bureau undertakes is the identification of insects This is a colossal task Since 1913, no fewer than 1 218 collections have been received, comprising more than 300 000 insects, of which about one third were blood sucking and the number of specific identifications involved has amounted to more than 20,000 Most of this work has been done by the staff, but various experts have been from time to time called in and have readily given their special knowledge to the bureau Named collections of injurious insects have been sent out to nearly forty different institutions Further, much progress has been made in the preparation of a catalogue of plant pests throughout the world Another duty the bureau has undertaken is to train young entomologists for work in the field—mainly in the American field—and this they have been able to do through the generosity of the late Mr Andrew Carnegie The bureau has also sent out special expeditions dealing with such subjects as the habits and distribution of the tsetse-fly, which conveys sleeping sickness, blood-sucking flies of the family *Tabanidae* (horse-flies, or gadflies) and the occurrence of *Stegomyia* in the East, which, owing to the opening of the Panama Canal, may become a danger to eastern Asia, as this mosquito is a carrier of yellow fever

Anthrax in the Navy

At the recent Brussels conference on public health Surg-Capt Bassett Smith read an interesting paper on the occurrence of anthrax in shaving brushes He pointed out that owing to the war the supply of shaving brushes was cut off Previously manufacturers realized the importance of not making brushes from hair derived from Russian, Japanese or Chinese sources as the hair from these countries was infected with anthrax in a large proportion of cases Some of the small manufacturers starting during the war to manufacture brushes in England being ignorant of this danger used the Chinese source of supply The result was that a number of anthrax-infected brushes were now on the market Six cases occurred in the navy, with four deaths Those who died showed marked cerebral symptoms and were diagnosed in the first instance as having cerebrospinal fever', but the anthrax bacillus was later recovered from the cerebrospinal fluid

The violent nature of the cases was perhaps due to the original infection being on the face. Preventive measures consisted in bacteriologic examination of all samples of hair or brushes, and rigid discarding of any consignment in which even one infected brush is found Routine sterilization of brushes should also be carried out In previous letters, cases of anthrax in civil life due to the use of Japanese shaving brushes have been reported and the government has in consequence prohibited their importation

MEXICO CITY

(From Our Regular Correspondent)

Aug 15 1920

Plague and Yellow Fever

As far as plague is concerned conditions are quite satisfactory at Vera Cruz since no new human cases have occurred besides the fifty-eight already mentioned At the pesthouse there remain only four patients The rat plague epizootic is apparently decreasing as few of the trapped animals are found infected by *B pestis* The president of the department of public health has ordered the reopening of the port although some precautionary measures will still be enforced as the detention and examination of notoriously unclean persons, who may carry fleas, forbidding the taking out of cats through Vera Cruz as they might contain the same parasites, and declaring antiplague vaccination optional Ships must remain at a distance from the wharf the cables will be properly protected and fumigation of shipholds will be compulsory before leaving port It has just been ordered that all cellars must be made rat-proof in a month, and the antirodent campaign will be continued indefinitely

In the port of Tampico another case of plague was discovered two days ago The campaign is being pushed in order to prevent the spread of the disease

As regards yellow fever I cannot speak so favorably The disease has increased and fifty-two cases with twelve deaths have been reported up to yesterday Possibly not all these cases are real fever,' but the majority undoubtedly are There have occurred at Merida two other cases of the same disease and three in the port of Progreso In view of the alarming increase of the epidemic, the department of public health ordered Dr B Vasconcelos to proceed to Vera Cruz to make an inspection and report on the causes of the reappearance and spread of yellow fever As a result of his report energetic measures have been adopted The personnel in charge of the campaign at Vera Cruz was changed, and Dr Manuel Macias who was in charge of the work in Dr Liceaga's time has again been made chief of this service An engineer has been sent to carry out the sanitary works considered most urgent and the number of sanitary inspectors has been increased in order to detect all patients and water containers not properly protected The number of oilers has also been increased In view of the fact that yellow fever was eradicated twelve years ago the people have grown careless with regard to water containers and a campaign of publicity will be carried out through the newspapers public lectures and films Dr Carl Michel of the U S Public Health Service has promised to obtain some appropriate

films from his country It has been advised to continue the use of neo arsphenamin in patients as it has given encouraging results, and the campaign will be intensified until the epidemic is completely eradicated It may be well to mention that the presence of yellow fever was confirmed not only by purely clinical data, but also through infecting a series of guinea-pigs with the patient's blood In one of these animals there was found in the blood and liver a parasite, conforming to the characters of Noguchi's leptospira, which, *though not studied culturally thus far is considered* identical These identification studies have been carried out by Dr Pedro Perez Grovas, in charge of the plague laboratory established recently

The preparation of the bacterial vaccine tried by Noguchi on guinea-pigs has been begun and while no accurate information is available as to the results obtained on human patients in Peru, it is hoped that it may be a powerful aid against yellow fever Some persons who had to visit the infected port asked to be vaccinated and for this purpose there was employed a small quantity of vaccine that Noguchi presented when he was last here

Opium Traffic

The police seized in an express office more than 500 Gm of 'cooked" opium received from Manzanillo and shipped to a person with a fictitious name, who has not been identified This opium has an estimated value of 200 000 pesos and has been placed at the disposal of the public health department by orders of the president It is assumed that this opium was intended as on previous occasions, to be smuggled into the United States, as in this country there are not many opium addicts

New Scientific Society

There has been organized the Mexican Society of Biology which for the time being will hold its meetings at the headquarters of the National Academy of Medicine The officers of the association are president Dr D Fernando Ocaranza, treasurer Dr. Eliseo Ramirez, and secretary, Dr Isaac Ocheterena Their employ has ten charter members, practically all phys[illegible] has [illegible]e address is Av del Brasil, No 33, Mexico

Scientific Delegation to Latin America

Dr D Sebastian Recasens a prominent Spanish physician, and Dr D Florestan Aguilar King Alphonso's dentist are planning a trip of cultural propaganda in Latin America during which they will visit Argentina Chile, Mexico and other countries on this hemisphere At the same time they will invite American physicians to attend the Spanish-American Medical Congress that will meet in Seville, and try to establish personal relations between Spanish and Latin American physicians

Personal

The Academy of Medicine has just received as a member in the section of legal medicine Dr F Castillo Najera who presented a thesis on hematologic investigations on the cadaver in order to determine whether traumatic lesions presented by dead bodies were caused in vita or postmortem ——Dr Carl Michel has arrived from Vera Cruz for a conference with the head of the department of public health on matters relating to sanitary conditions at the above mentioned port Dr O Gonzalez Fabela who until recently was in charge of the yellow fever campaign at Vera Cruz arrived with Dr Michel——Dr Nicolas Remirez de Arellano has resumed his functions as a member of the board of public health He had obtained this position many years ago in open competition and was deprived of it by the previous government He had also been professor and dean of the School of Medicine.

Marriages

SAMUEL H JAMES Major M C U S Army, Whipple Barracks Prescott Ariz, to Miss Afra Myron of Glenwood, Minn recently

GEORGE E PICKETT, Lieutenant M C, U S Army, to Miss June D Oglesby of Salt Lake City, at Washington, D C, August 19

RUSSEL DAVID BUSSDICKER Lieutenant M C U S Navy, Philadelphia, to Miss Lulu Blanche Gillis, at Kinsman, Ohio, August 11

CLARENCE M DARGAN Beverly Hills, Chicago to Miss Madge Grove of Pontiac, Ill August 3

ROWLAND W BACHMAN Allentown Pa to Miss Rose Elizabeth Johnson of Easton Pa August 4

JOHN W WILCE, Columbus Ohio, to Miss Minerva W Conner of Cincinnati, August 2

Deaths

Emil Heuel ⊕ New York, University of the City of New York 1883 aged 57 a member, secretary vice president and president of the American Electro-Therapeutic Association a Fellow of the New York Academy of Medicine, visiting surgeon to St Joseph's St Luke's and Polyclinic hospitals, Lieutenant M C N Y N G, a specialist in diseases of the nose and throat, died August 11

Daniel J Phelan ⊕ San Jose Calif formerly of New York Bellevue Hospital Medical College 1895, a specialist in pediatrics, aged 56, visiting physician to St Luke's St Elizabeth's and Bellevue hospitals who had been operated on twice at the O Connor Hospital San Jose, died, August 9

Thomas H McKee ⊕ Buffalo N Y, University of Buffalo N Y 1898, aged 57, Major M C U S Army, and discharged November 9 1918, lecturer on surgical anatomy and dean of the faculty of his alma mater, president of the Roswell Park Club, died August 1, from pneumonia

Kirby Curtis Garner, St Louis, Beaumont Hospital Medical College, St Louis 1901, aged 41, a member of the Missouri State Medical Association died in the St Louis City Hospital, August 5 from injuries received in a collision between his automobile and a motorcycle

John Kenwood Dawson, Sterling Colo Queens University, Kingston Ont, 1903 aged 45 a member of the Colorado State Medical Society, a veteran of the war with Spain, president of the Northeastern (Colo) Medical Society in 1918 died August 8 from heart disease

Sherman Cooper, New York, New York Medical College, New York 1857, for sixty years a practitioner of Westfield N J aged 87, surgeon of U S Volunteers during the Civil War died at the home of his daughter in New York, August 9

Henry Elsifer Mereness, Albany ⊕N Y, Albany (N Y) Medical College 1874, aged 71, a member of the Medical Society of the State of New York, acting assistant surgeon, U S P H Service since 1880, died, August 4, from heart disease

William Monroe Handleman, New York, Long Island College Hospital Brooklyn 1911 aged 30 Lieutenant M C, U S Army and discharged May 14 1919 attending physician to the Hebrew National Orphan Asylum, died, August 8

Redfield Benjamin West, Guilford Conn University of the City of New York 1879 aged 72 a member of the Connecticut State Medical Society state chemist since 1893, health officer of Guilford since 1897, died, July 12

George David Heist ⊕ Philadelphia Jefferson Medical College 1917 aged 35, Lieutenant M C U S Army, and discharged June 6 1919, died in the Jewish Hospital, Philadelphia August 8 from cerebrospinal meningitis

⊕ Indicates Fellow of the American Medical Association

Charles Earl Daily, Lake Taneycomo, Mo , Central College of Physicians and Surgeons of Indianapolis, 1898, aged 50, died at a hospital in Springfield, Mo, June 8, from peritonitis, following an operation for appendicitis

John W Howell, Bryan, Texas, Southern Medical College, Atlanta, Ga , 1883, aged 61 chairman of the board of directors of the First National Bank of Bryan, died in a hospital in Galveston, Texas, August 6

Peter H Heller, Pueblo, Colo , Georgetown University, Washington, D C , aged 74, a member of the Colorado State Medical Society, physician to the Sacred Heart Orphanage, died, August 3, from nephritis

Beniah L Lewis, Harrington, Del , University of Pennsylvania, Philadelphia, 1873, aged 72, once a member of the Delaware state senate and speaker of the house of representatives, died, July 30

Charles W Radway, Mexico, N Y , New York Homeopathic Medical College, New York, 1876, a member of the Medical Society of the State of New York, died, August 2

Lorenzo John Locy ⊕ Davison, Mich , University of Michigan Ann Arbor, 1881, aged 64, died in the Goodrich (Mich) General Hospital, August 16, from cerebral hemorrhage

Thomas Upham Coe ⊕ Bangor, Me , Jefferson Medical College, 1861, aged 82, a large timber owner, died at his summer home in Kineo, Me, July 31, from pneumonia

Roselette Bird, Beaver Dam Wis , College of Physicians and Surgeons, Keokuk, Iowa, 1894, aged 71, died in Waukesha, Wis, July 10, from bronchopneumonia

Ernest Theodore Kegel, Gainesville, Fla , State University of Iowa, Iowa City, 1896, aged 45, a member of the Florida Medical Association, died, August 11

George W Beach, Apalachin, N Y , Yale University, New Haven, Conn, 1864, aged 81, died in Binghamton, N Y, June 10, from senile debility

George Eliot Klingerman ⊕ Oakland, Calif , George Washington University, Washington, D C, 1910, aged 32, died in Glendale, Calif, May 27

Orville B Thompson, Oklahoma City, Bellevue Medical College, 1866, aged 79, died at the home of his daughter in Ardmore, Okla, July 30

Samuel George Barton, Toronto, Ont , University of Victoria College Cobourg, Ont, 1887, aged 58, died, April 21, from heart disease

William C Lewin ⊕ Buffalo, N Y , Niagara University, Buffalo, N Y, 1895, aged 57, a specialist in ophthalmology, died, August 1

Frederick A Strasenburgh ⊕ Avon, N Y , University of Buffalo N Y, 1886, aged 57, died, August 2, from cerebral hemorrhage

Karl J Severance ⊕ Keeseville, N Y , Hahnemann Medical College, Chicago, 1889, aged 54, died, July 28 from meningitis

Stanley Davis Terry, New York, College of Physicians and Surgeons in the City of New York 1875, aged 73, died August 8

James F Sherman, Rochester, N Y , University of Buffalo, N Y 1885, aged 58, died at his summer home White City, August 4

Edward W Crecelius, Norwalk, Ohio, Cleveland Homeopathic Medical College, 1900, aged 48, died, July 10, from tetanus

Mary E Smith, Elk Run Pa , Homeopathic Hospital College, Cleveland Ohio 1887, aged 72, died, July 30

John A Bland, Edinburg Ind Cincinnati College of Medicine and Surgery, 1865, aged 82, died, August 12

Jay D Van Wirt, Johnsonville N Y , Albany (N Y) Medical College, 1883, aged 61, died July 22

Henry C Chapin, Oil City Pa , University of Wooster Cleveland, 1878, died August 3, from asthma

John L Butterworth, Nashville Tenn , University of Nashville, Tenn, 1888, aged 51, died, August 2

William J Karlsroe, New York University of Louisville, Ky , 1893, aged 71, died August 8

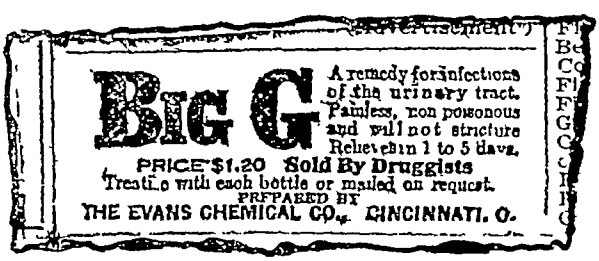
The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

MORE MISBRANDED NOSTRUMS AND DRUG PRODUCTS

Tonic Remedy—Ten boxes of this preparation were consigned in November, 1918, by Teele & Co of San Francisco, and were seized by the federal authorities in Seattle The preparation a nostrum of the alcoholic type, was labeled A Remedy for Chronic Diseases, Nervous System, Blood, Stomach, Kidney Troubles and Rheumatism' and was said to be "Prepared by Dr Yan Nin Tong, Canton, China' It was declared misbranded because the label failed to show the quantity or proportion of alcohol present and because the therapeutic claims were false and fraudulent No claimant appeared and the court adjudged it condemned and forfeited and ordered that it should be destroyed by the United States marshal—[*Notice of Judgment No 7009, issued July 7, 1920*]

Big G—In January, 1919 the Evans Chemical Co, Cincinnati, Ohio shipped a quantity of Big G' which was labeled in part 'A Compound of Borated Goldenseal' Analyzed by the federal chemists, it was shown to consist essentially of a watery solution of boric acid and berberin There was no hydrastin present The stuff was declared adulterated because, while it was labeled borated goldenseal, it contained no borated goldenseal and therefore its strength and purity fell below the professed standard and quality under which it was sold It was declared misbranded because it was falsely and fraudulently represented that the product was effective in the treatment, cure or prevention of unnatural discharges of the urinary organs gonorrhea, gleet stricture spermatorrhea bubo, gonorrheal cystitis, balanitis, leukorrhea, whites and a number of other diseases "when in truth and in fact the article did not contain any ingredient or combination of ingredients capable of producing the effects claimed for it" In July 1919 no claimant having appeared the court condemned the property and ordered the United States marshal to destroy it—[*Notice of Judgment No 7210, issued August 16, 1920*]

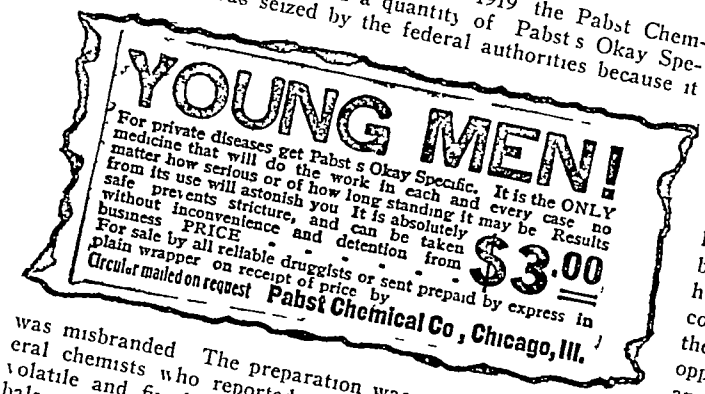


"Plantation Sarsaparilla," "Magic Eye Salve" and "Femenina"—The Van Vleet Mansfield Drug Co, Memphis Tenn, shipped in May 1918 from Tennessee to Alabama and Mississippi, a quantity of 'Plantation Sarsaparilla" Magic Eye Salve" and Femenina ' The federal chemists reported that Plantation Sarsaparilla' was found to consist essentially of potassium iodid alcohol plant material sugar and water This was falsely and fraudulently represented as a cure for chronic rheumatism, lumbago, syphilis scrofula cancer, pimples congestion chills etc The Magic Eye Salve' according to the chemists was found to consist essentially of zinc oxid benzoic acid and petrolatum This was labeled as a cure for all diseases of the eye both acute and chronic These claims of course were declared false and fraudulent 'Femenina was reported by the federal chemists to consis essentially of alcohol sugar water and unidentified material with indications of valer an It was falsel and fraudulently

represented as a cure for diseases peculiar to females, for making women strong and healthy and giving them full sexual capacity, as a cure for falling of the womb nervousness "hysterics" headache, habitual constipation etc In September, 1919, the Van Vleet-Mansfield Drug Co pleaded guilty and was fined $150 and costs—*[Notice of Judgment No 7144, issued July 27, 1920]*

Balsam Copaiba, Salol Compound, and Methylene Blue Compound—The Evans Drug Mfg Co Greensburg, Pa shipped in January and February 1918, a number of boxes of capsules some of which contained Balsam Copaiba, some contained Methylene Blue Compound and others contained Salol Compound Analyses by the Bureau of Chemistry showed that the Copaiba capsules were deficient in quantity from 13 per cent to 23 per cent and that the contents consisted of approximately 50 per cent cotton seed oil The Methylene Blue Compound capsules were deficient in quantity between 25 per cent and 28 per cent and the contents consisted of approximately 50 per cent cotton seed oil The Salol Compound capsules consisted of a mixture containing from 50 per cent to 60 per cent cotton seed oil They were declared adulterated because they were below standard in strength and purity and they were declared misbranded because of the false and misleading statements regarding the contents No claimant appeared for the property and on June 30 1919 the court condemned the product and ordered the United States marshal to destroy it—*[Notice of Judgment No 7177 issued August 13 1920]*

Pabst's Okay Specific—In March 1919 the Pabst Chemical Co, Chicago shipped a quantity of Pabst s Okay Specific which was seized by the federal authorities because it



was misbranded The preparation was analyzed by the federal chemists who reported that it consisted essentially of volatile and fixed oils plant extractives including cubebs balsam of copaiba and buchu and over 29 per cent of alcohol The stuff was declared misbranded because the claims on the trade package represented that the article was effective for the treatment remedy or cure of gonorrhea gleet urethritis and chronic mucous discharge These claims were declared false and fraudulent because the article did not contain any ingredient or combination of ingredients capable of producing the effects claimed In June 1919 no claimant having appeared the court ordered the stuff condemned and destroyed by the United States marshal—*[Notice of Judgment No 7250 issued August 16 1920]*

Liebig's Diarrhoea Cordial—Parker-Blake Co Ltd New Orleans shipped in July 1918 a quantity of Liebig s Diarrhoea Cordial The government chemists reported that this product was found to contain 1/6 grain of morphin sulphate to each fluidounce and 6 27 per cent of alcohol by volume and to consist essentially of a solution of morphin sulphate catechu tannin oil of cassia oil of peppermint sugar, alcohol and water It was declared misbranded first because it was falsely and fraudulently represented as a remedy for cholera and dysentery and second because it was falsely and misleadingly represented as a product that 'may be taken with perfect safety by infants while teething' although the stuff contained morphin sulphate In June 1919 the Parker-Blake Co, Ltd pleaded guilty and was fined $10—*[Notice of Judgment No 7145, issued July 27 1920]*

JOUR A M A
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Correspondence

"DISEASE TRANSMISSION AND THE SCHOOL"

To the Editor—My article (*Weekly Health Review* May 29 1920 published by the Detroit Department of Health), to which Dr Strode referred in THE JOURNAL last week page 557 was a review of the age distribution of certain diseases in Detroit during the calendar year 1919 The percentage of cases by age groups from 1 to 9 was given as well as a summary which indicated that there had occurred prior to the tenth year of age 70 per cent of all scarlet fever, 62 per cent of diphtheria 89 per cent of measles, 96 per cent of whooping cough and 83 per cent of chickenpox In all but whooping cough the greatest amount of disease occurred at 6 years The point was made that, although the child beginning school showed more disease than at other ages this did not necessarily mean that the school was responsible for more disease but rather that the school revealed more disease. To support this contention it was pointed out that the increase in the sixth year over the fifth year was no greater in most instances than the increase of the fifth over the fourth or the fourth over the third year or the second over the first year

If the school were primarily responsible for spreading communicable disease we should naturally expect a marked increase in disease at school age an increase greatly in excess of the increases from year to year among preschool children Such a marked increase among those entering school did not occur in Detroit in 1919 The figures on which the conclusions were based represented 2 664 cases of scarlet fever 3 576 of diphtheria 1 773 of measles 860 of whooping cough and 927 of chickenpox

I maintain that with medical and nursing service such as is provided to the school by the modern city department of health the influence of the school in spreading disease need be no greater than the influences at work among children at home or at play City children have ample opportunity for contracting disease by contact with other children outside the school These opportunities are so multiple that the opportunity offered by contact in the schools makes little, if any difference The influence of contact through school attendance in spreading disease is offset by efficient inspection to eliminate the sick in the early stages of the disease The reason for stating that the school reveals more disease is founded on the work of the nurses In October, November and December 1919 our nurses found in the schoolroom 22 cases of scarlet fever 8 of diphtheria, 14 of whooping cough, 9 of measles 15 of chickenpox and 6 of mumps By going to the home to investigate suspicious absences from school the nurses discovered 21 cases of scarlet fever, 13 of diphtheria 26 of whooping cough, 135 of measles, 45 of chickenpox and 2 of mumps Many of these cases would never have come to the attention of the health department but for the vigilance of the nurses at the school

Nearly 50 per cent of Detroit s population was born abroad Many of the foreign born do not call a physician at times of illness During January fourteen deaths occurred from measles and only three of the number had been reported as cases to the health department In ten cases the physician had been in attendance less than five days prior to the death, or usually not till pneumonia had developed The failure to report was thus due mainly to the fact that the patient was not being attended by a physician Consequently, many cases of disease exist and remain unreported However when a child of school age is sick the fact is soon revealed Reports made to the health department will be more complete for children of school age than for those below

It is quite conceivable that in rural communities with families widely scattered and without adequate medical inspec-

tion, the school serves as an important center for the transmission of communicable disease This need not be true with efficient medical inspection

Dr Strode offers, as supporting evidence that the school spreads disease, the morbidity records for Pennsylvania by months Disease is high in the months when school is open It is lowest in the summer, when the schools are closed This fluctuation is not peculiar to Pennsylvania It is common to the United States as a whole If there were no seasonal changes, we should suspect the school, but climate, weather and season play a great part in the disease fluctuation Scarlet fever is almost an unknown quantity in tropical climates, and yet children go to school

Scarlet fever, diphtheria and measles are low in Los Angeles and New Orleans They are high in colder northern cities

Dr Strode believes that the prevalence of children's diseases during the school session incriminates the school Pneumonia is likewise greater during the school session Lobar pneumonia is not a child's disease Lobar pneumonia is a disease of adults It varies with the seasons, as do scarlet fever and diphtheria, and yet the school influence is wanting

In view of the fact that such a great amount of minor contagion (meaning measles whooping cough and chickenpox, as distinguished from scarlet fever and diphtheria) occurred under 10 years of age, I offered the comment that the "exclusion from school of children above 10 years or at least 12 years because a younger brother or sister had some minor contagion, would hardly justify the time lost from school" It is the custom in many cities to exclude from school all children in families where there is communicable disease, particularly if the previous disease history of the well children is not known It is assumed that they are susceptible or dangerous as possible carriers, and they are kept from school as a safeguard to other children In minor contagion where an isolation of the sick person has been established, it would seem to be the wiser course to give the well children in the household the opportunity of continuing at school, having them report each morning to the nurse or physician If suspicious symptoms appear, then exclusion is in order If not, the children remain at school By this procedure many days of unnecessary absence from school will be avoided

GEORGE T PALMER, D P H, Detroit
Epidemologist, Detroit Department of Health

"WHY PROPRIETARIES FLOURISH"

A Pharmacist's Point of View

To the Editor —The experience of Dr Eggleston and his colleagues (described by Dr Eggleston in THE JOURNAL August 21, p 558) is a severe arraignment of present day pharmacy Briefly stated, the conditions are 1 Instead of prescribing pharmacopeial drugs and depending on the pharmacist to compound the prescriptions, a very large proportion of the medical profession prescribes the ready-made tablets, pills, elixirs and what-not of the pharmaceutical houses or the shotgun mixtures exploited by pharmaceutical specialty concerns 2 As a result of these conditions, the pharmaceutical houses pay little attention to the manufacture of official pharmacopeial preparations, but "push" their own "formulas" Also, because of the rare demand for pharmaceutical training, the present day pharmacist all too often devotes his energy to the promotion of sales of cigars, soda water and toilet articles rather than to the practice of professional pharmacy

How physicians become dependent on pharmaceutical houses for the formulation of their prescriptions is a story that has been told repeatedly in THE JOURNAL To some extent these conditions are being changed through better instruction in medical schools and by the efforts that are being made by the Council on Pharmacy and Chemistry It is a pity, though, that in the meantime men with thorough pharmaceutical training and high professional ideals are, to a very large extent, driven to discard professional aspirations and devote themselves to drug 'trade" for all there is in it

It requires no special pharmaceutical skill or costly equipment to prepare troches of ammonium chlorid, compound laxative pills or emulsion of cod liver oil, or to coat pills with gelatin, and the failure of the pharmacists to fill the prescriptions for these preparations, as cited by Dr Eggleston, and which I acknowledge is just criticism, shows a lamentable condition of lassitude or an inexcusable state of ignorance on the part of the pharmacists in question

In justice to professional pharmacy, however, it should be appreciated that there are trained pharmacists in every large city—and in small ones too—who are competent and anxious to fill prescriptions such as Dr Eggleston and his colleagues write However their professional modesty prevents them from self advertisement It behooves Dr Eggleston and his associates to find them

ANDREW SCHERER, PH G, Chicago

"FURTHER NEW ZOOPARASITES OF MAN"

To the Editor —In THE JOURNAL, July 17, an editorial headed 'Further New Zooparasites of Man' indicates that the newly discovered parasite *Rhabditis hominis* (temporarily named) reported from the Chosen-Government General Hospital, at Seoul, differs in at least one respect from *Strongyloides stercoralis,* in that the former is viviparous, the ova being found in the feces as a differentiating point in the latter As a matter of fact, ova of *Strongyloides stercoralis* are never found in the stools of individuals so infested, their presence being determined only by identifying the young, rhabditiform worms Compared to some of the less frequent intestinal parasites, *Strongyloides stercoralis* is a rather common infestation in his part of the country, the young worms being readily detected in the stools of adults as well as in children In my examination of a large number of stools, over a period of ten years, the incidence of *Strongyloides stercoralis* would compare favorably with findings in the Korean investigation, referred to in this article, in which the new parasite was found in a goodly percentage of more than a thousand school-children examined However, in none of my cases have the ova of *Strongyloides stercoralis* been identified which is more than suggestive of the viviparous nature of this parasite Without further points of differentiation, other than their nature of propagation, these parasites may easily be one and the same

ROBERT F FENNELL, M D, Guntersville, Ala

GRADUATE MEDICAL STUDY ABROAD

To the Editor —Now that the war is over, many American physicians will again attend the medical clinics of Europe With this point in mind I am prompted to relate my experiences of the last few months in Europe I attended clinics in many of the large cities of Germany, such as Hamburg Berlin, Breslau and Leipzig hoping to find conditions in one or more of these cities suitable for my work Abundant material was found everywhere, especially in the dermatologic clinics, where I devoted most of my time. At present there is no organized course for graduate instruction, and owing to the overcrowding conditions, the lack of proper equipment and the

is necessarily performed quite differently from what it was under normal conditions The German physician is not ignorant of these conditions, and naturally has very definite ideas as to the cause of the great change The object of this letter, however, is not concerned with the cause It is simply to remind the American physician who contemplates postgraduate work in Europe that we have been at war with Germany and that this fact is still fresh in the minds of the German physicians

The postgraduate schools of France, Belgium and England are too well known in America for any comment in this letter However, it seems that there are some advantages in the London school which are lacking in other places There is a distinct effort in London to arrange the work in each hospital in such order as to time and place that will enable one to devote the maximum time to his special line For example in dermatology one is able to devote virtually the whole day to clinical demonstrations The courses are outlined in a bulletin that is issued each week by the Fellowship of Medicine and Post-Graduate Medical Association which includes the work at the different hospitals and medical schools such as clinical instruction in wards and outpatient departments clinical lectures and demonstrations afternoon demonstrations laboratory work, etc All of this work is open to the members of the postgraduate school for the nominal sum of £4 a month

J RICHARD ALLISON, A B, M D, London

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

BIOGRAPHIES OF PHYSICIANS NOMINATED FOR THE HALL OF FAME

To the Editor—Please give a brief biographic sketch of the following physicians and surgeons whose names have been placed in nomination for the American Hall of Fame (1) Frank Abbott (2) William Tillinghast Bull (3) John Murray Carnochan (4) Charles T Jackson (5) William Shippen Jr and (6) Lyman Spalding Please omit my name

J C T

1 Frank Abbott is not found in any available list of prominent physicians There was a practitioner of dentistry of that name author of a work on 'Dental Pathology and Practice Philadelphia 1896

2 William Tillinghast Bull (1849-1909) was an eminent surgeon of New York professor of practice of surgery and clinical surgery at the College of Physicians and Surgeons New York, and is credited with an early successful laparotomy for multiple gunshot wounds of the intestine

3 John Murray Carnochan (1817-1887) was a pioneer American surgeon and is credited with the early performance of several daring operations He successfully ligated the femoral artery just below the deep femoral in 1851 was the first in America to excise the entire lower jaw at one operation (1851), to excise the ulna (1853), the radius (1854) and the calcaneum (1857) to excise the superior maxillary nerve including Meckel's ganglion, for facial neuralgia (Carnochan's operation 1856), and to ligate the carotid artery on both sides (1867)

4 Charles T Jackson (1805-1880) was one of the principal figures in the anesthesia controversy In 1835 he opened the first laboratory for the teaching of analytic chemistry in the United States at Boston and was the first to direct attention to the mineral resources of the southern shore of Lake Superior After the successful introduction of ether anesthesia Jackson claimed that he suggested the use of sulphuric ether to Morton and his contentions to the right of discovery were recognized by a considerable number of followers here and abroad

5 William Shippen Jr (1736-1808), of Philadelphia established the first systematic course in anatomy and obstetrics in the United States (privately in 1762), and was professor of anatomy and surgery in the medical department of the College of Philadelphia the first medical school in the United States organized by John Morgan in 1765 He succeeded John Morgan as director-general of the military hospitals and physician-in-chief of the American Army (1777), and was one of the founders of the Philadelphia College of Physicians

6 Lyman Spalding (1775-1821) is best known as the originator of the United States Pharmacopeia (1820) the detailed plan for which he submitted to the Medical Society of the County of New York in 1817 He assisted Nathan Smith in the foundation of the Dartmouth Medical College (1797), was a pioneer in testing publicly the efficacy of vaccination against smallpox (1801) and was a distinguished lecturer on anatomy

TECHNIC OF WASSERMANN TEST

To the Editor—I understand that there has been a new method perfected for making the Wassermann test without the use of fresh sheep's blood I am trying to establish a laboratory in connection with my office and for some cases in a near by hospital My chief difficulty has been that in supplying the great demand for the Wassermann test in this vicinity I am unable to procure sheep's blood or the use of guinea pigs It has been my impression that this new Wassermann test appeared in one of the recent numbers of THE JOURNAL but I have been unable to find the article If you know of this method and feel that it is equally reliable if more simple than the older methods may I not ask you to assist me in obtaining the information I desire?

HENRY B DORR M D Ocean Grove N J

ANSWER—In the performance of the original Wassermann test the use of fresh or of well preserved sheep's blood is essential However some years ago Noguchi (*J Exper Med* **11** 392 1909) introduced a human hemolytic system to replace the sheep hemolytic system of the original Wassermann test using as the cells to be hemolyzed a suspension of human blood cells but employing guinea-pig serum as complement More recently he (*J Exper Med* **28** 43 [July] 1918) has brought out a complete homohemolytic system for the test using human serum as complement instead of the guinea-pig serum employed in all other modifications as complement This modification eliminates the foreign complement and corpuscles from the test for the serodiagnosis of syphilis utilizing fresh human serum for the source of complement for the production of hemolysis on the human corpuscles in the presence of an adequate amount of the specific antihuman amboceptor Full details of this test are outlined in the article mentioned above The results obtained with this modification seem satisfactory and apparently as reliable as those obtained with other modifications of the original technic

SILVER SODIUM SALVARSAN

To the Editor—Please let me have information on silver sodium salvarsan especially as regards its curative powers compared to other arsenic compounds dosage preparation and strength of solutions reactions contraindications etc and also whether it is better to combine it with mercurial treatment Please omit my name

Dr J C R Mexico D F

ANSWER—Ehrlich and his co-workers experimented with the possibility of combining arsphenamin with other metals, they succeeded in making 'copper-arsphenamin' A recent development along the same lines is 'silver salvarsan" According to a recent report of the Medical Research Committee of Great Britain silver salvarsan' is apparently a similar molecular combination of '606' with silver in some form though no details are available as to its exact formula According to Kolle Ehrlich's successor at Frankfort the ratio of the dose which apparently cures experimental syphilis in rabbits to the maximum dose tolerated by the animal is 1 40 as compared with 1 10 in the case of '606' The substance is on trial and its promiscuous use at this time would be ill advised In the United States no license has been granted by the Treasury Department for 'silver salvarsan' and it cannot be sold in interstate commerce Recent abstracts on the subject that have appeared in THE JOURNAL are

Rille and Fruhwald Silver Salvarsan Sodium in the Treatment of Syphilis *Munchen med Wchnschr* **66** 1226 (Oct 24) 1919 abstr THE JOURNAL Feb 21 1920 p 568

Nageli O Silver Sodium Salvarsan *Schweiz med Wchnschr* **50** 161 (Feb 26) 1920 abstr THE JOURNAL May 1 1920 p 1289

Kolle Schlossberger and Leupold Means to Ward Off Arute Effects of Arsphenamin *Med Klin* **16** 355 (April 4) 1920 abstr THE JOURNAL July 10 1920 p 139

Medical Education, Registration and Hospital Service

PLANS FOR MODERN OFFICES FOR PHYSICIANS

RICHARD E SCHMIDT, F A I A
CHICAGO

In planning an office for the physician with a large practice, several points should be kept in view A waiting room of liberal dimensions with an interesting outlook and attractively furnished and decorated should be provided In a suite occupied by several physicians, it may be necessary to have a clerk in the reception room in addition to the telephone operator In any plan it is desirable to have the patients' record files accessible to the clerk, so that records may be delivered to the physician in proper sequence and in advance of the admission of the patient into the physician's office The necessity for an inside private corridor with an exit other than that through the reception room is obvious There is the question whether there should be fewer examination or treatment rooms and more dressing rooms, rather than a large number of examination or treatment rooms with no dressing rooms Both arrangements occupy about the same amount of space but the latter appears to be more satisfactory

To locate an office in a new building is obviously more advantageous than to locate it in an existing building as conduits for wires, pipes for water, steam waste and air can be concealed behind the plaster or under floors, and extended to points immediately adjacent to apparatus resulting in the neatest arrangement whereas in an old building many of these service pipes must be extended on the face of the walls resulting in disfigurement and requiring additional labor to keep them in a presentable condition When a physician obtains a lease of office space while the building is in an early stage of construction the wiring plumbing and heating pipes and other work can be installed in concealed places without the loss caused by alteration of existing work Furthermore outlets may be placed immediately adjacent to the equipment, and there are no unsightly pipe extensions

The selection of materials for walls, floors and finish depends on the use of the offices For treatment or surgical work those standard for hospital work should be used, if the offices are purely consulting or medical, any furnishing or finish suitable for high grade business offices will be satisfactory

In the physician's suite illustrated in Figure 1, the entire floor (1,635 square feet) is tiled with 1¼ inch white ceramic mosaic tile, with rugs in the waiting room and in the private office The walls and ceilings of the private corridor and of the treatment rooms are finished in gloss white enamel The long walls of the filing room back of the bookkeeper's desk are filled with steel safes for records In the private corridor are 25 lineal feet of instrument cabinets, extending from floor to ceiling These cabinets have sliding doors and a unique arrangement by which instruments are suspended from metal bars and placed in regular order, according to their size Instruments arranged in this way are found more quickly than if lying on shelves or in drawers

The roentgen-ray room is arranged for complete roentgenologic treatment, it also contains a plate display box The laboratory is equipped with microscope stand centrifuge constant temperature water bath, gas and electric sterilizer refrigerator incubator water still, and specimen and other cabinets All of the treatment rooms in this suite have running water and modern enameled metal equipment and furniture.

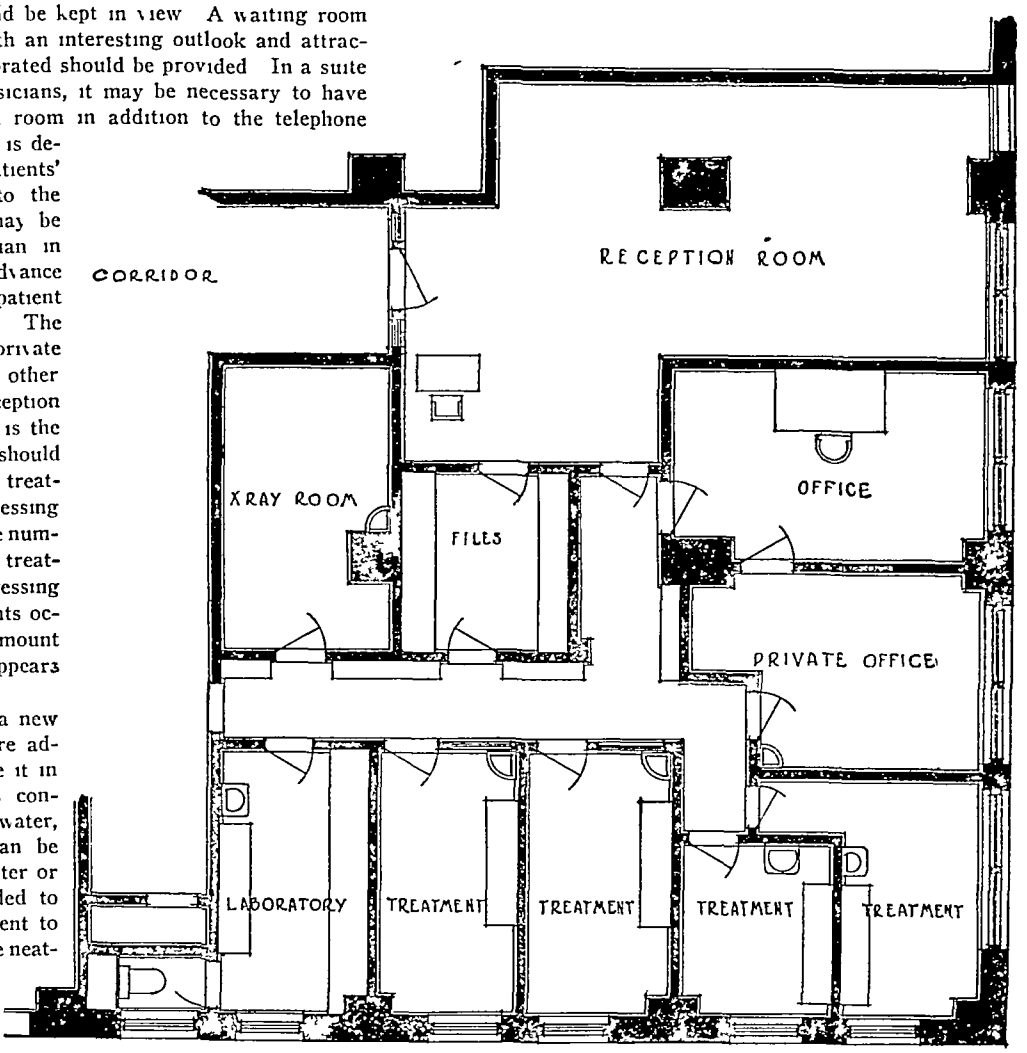

Fig 1—Physician s suite The special features here are the number of treatment rooms with absence of dressing rooms placing of instrument cases in corridor and proximity of file room to recepton room attendant's desk.

The office illustrated in Figure 2 is located in a new office building where the space permitted an excellent and liberal arrangement The roentgen-ray department has a suite consisting of office and plate room, machine room, roentgenographic room, fluoroscopic room, dark room, and toilet and dressing rooms There are two laboratories one of which has a separate dark room and a small room for metabolism tests This small room is equipped with couch and respiration apparatus The laboratory is equipped with autoclave, still, centrifuge, incubator, etc The several offices are equipped with call buttons buzzers and intercommunicating and city telephones The installation of running water in the laboratory and dark room sinks is unusually liberal The conveniences and appointment will obviously be appreciated by the public and by the physician because of the facility with which service can be rendered

Figure 3 shows how a suite of offices was planned for an existing building This group of offices accommodates four specialists representing, respectively, medicine, surgery, dentistry and eye, ear, nose and throat Each office is completely furnished with the equipment adapted to its particular service It will be noticed that three of the suites have patients' dressing rooms with double exits The private corridors furnish necessary intercommunication and exit from the office. One of the important features in connection with this group of offices is an exceptionally large and attractive reception room

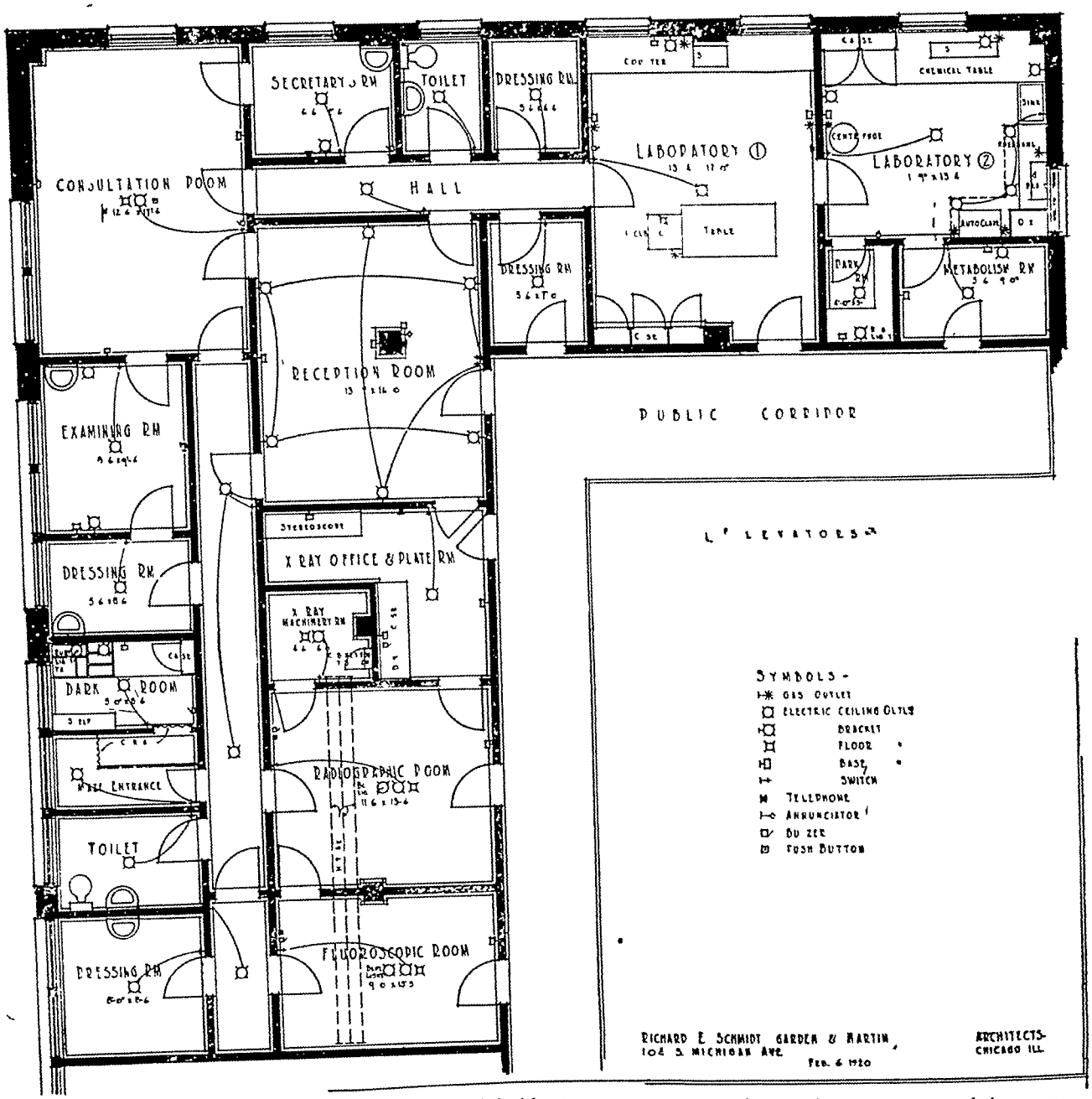

Fig 2.—Noteworthy features here are the liberal size of the laboratories roentgen ray consultation and reception rooms and the arrangement of roentgen ray rooms and auxiliaries

Graduate Course in Public Health

We are informed that a graduate course in public health has been offered at the Ohio State University in cooperation with the state department of health since 1915 During the session of 1919 1920, there were three professors and two instructors in addition to the eleven staff members of the state department of health The course extends over one year and leads to the degree of Master of Science in Public Health The applicant for admission must be a graduate of

a Class A medical school or hold a bachelor's degree from an approved college, in the preparation for which he has completed courses in chemistry, physics, zoology, anatomy physiology and bacteriology A thesis is required for graduation Nine graduate students were enrolled during the session and of this number four graduated with the degree of Master of Science An extension course of two and one-half months was offered and attended by forty-two health officers (physicians) Two courses also were offered in public health nursing one extending over four months and the other over one year, the latter leading to a certificate of public health nursing Two nurses received this certificate during the last year There is also a five-year course in science-nursing leading to a certificate of graduate nurse and a Bachelor of Science degree

Book Notices

HEALTHY LIVING Book One How Children Can Grow Strong for Their Country s Service By Charles Edward Amory Winslow D P H Professor of Public Health Yale Medical School With a Chapter on Physical Exercises by Walter Camp Cloth Price 76 cents Pp 248 with illustrations New York Charles E Merrill Company 1920

HEALTHY LIVING Book Two Principles of Personal and Community Hygiene By Charles Edward Amory Winslow D P H Professor of Public Health Yale University Medical School With a Chapter on Sport and Health by Walter Camp Cloth Price $1 04 Pp 405 with illustrations New York Charles E Merrill Company 1920

In a kindly statement to the children who may use these books Professor Winslow explains their conception and purpose He has tried to describe the human body and how it works He has told of its enemies and how they may be combated He has illustrated his technical points with interesting stories and he has kept to the foreground the patriotism which should animate citizens of a great country to develop that state of health which may enable them best to serve their country He has succeeded remarkably in this difficult task. Those who know of the scientific achievements of the author may well wonder at the pedagogic ability displayed in this work. Perhaps the great interest of the author in his "daughter Nancy aged 10 years who read the manuscript of the book and criticized it from the standpoint of the children who may use it is partly visible. Certain other children of 8 or 10

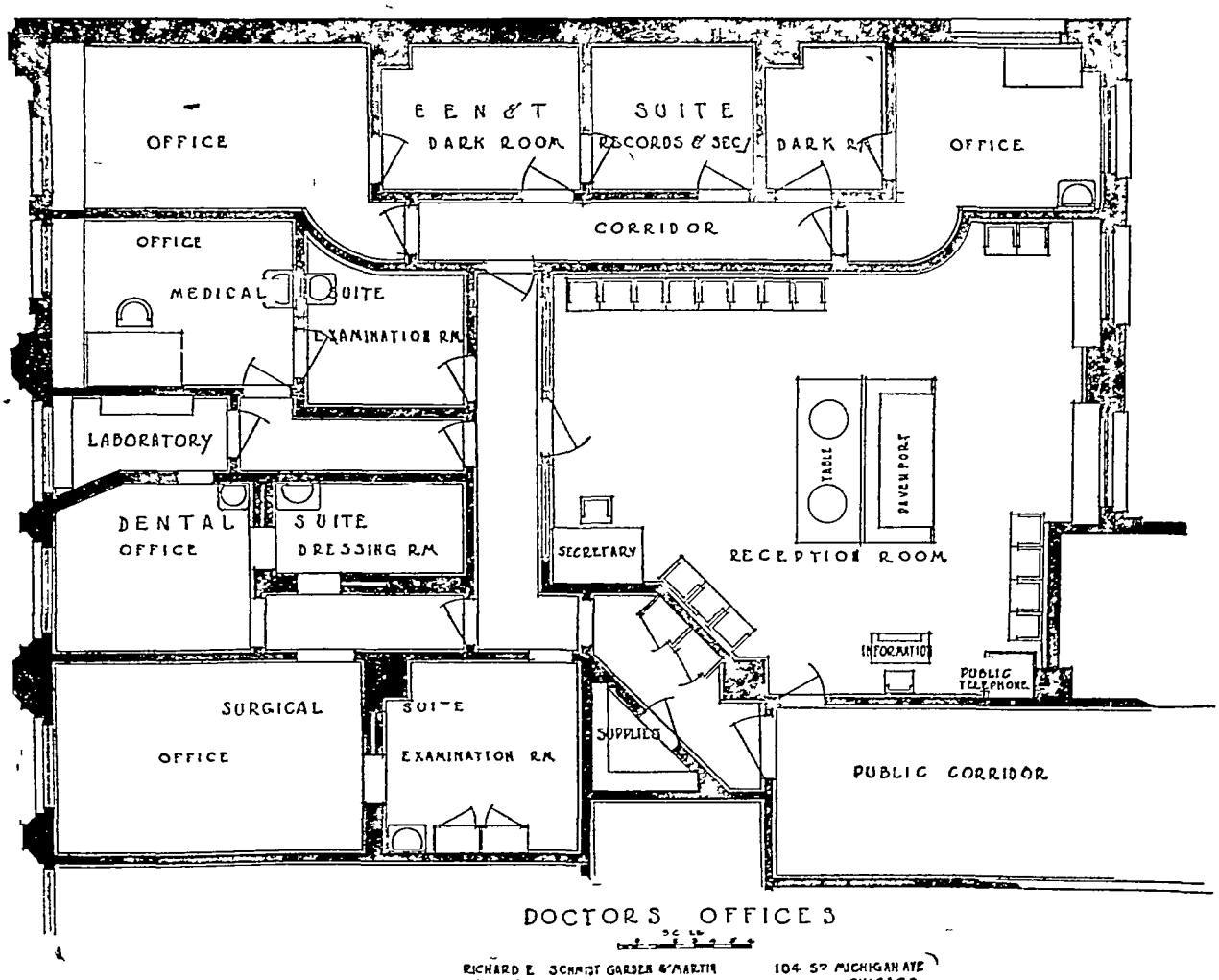

Fig 3—Suite of offices for four specialists Note the liberal dimensions of the reception room also convenient arrangement of eye ear nose and throat suite for eye work

COMING EXAMINATIONS

ALASKA Juneau Sept 7 Sec Dr Harry C De Vighne Juneau
ARIZONA Phoenix Oct 5-6 Sec Dr Ancil Martin Phoenix
COLORADO Denver Oct 5 Sec Dr David A Strickler Denver
IDAHO Boise, Oct 5 Commissioner Hon Robert O Jones Boise
HAWAII Honolulu Sept 6 10 Sec Dr R W Benz 1141 Alakea St Honolulu
ILLINOIS Chicago Sept 20 23 Director Francis W Shepardson State House Springfield
IOWA Des Moines Sep 13 17 Sec, Dr Guilford H. Sumner Capitol Bldg., Des Moines
MINNESOTA Minneapolis Oct 5 7 Sec Dr Thomas S McDavitt, St Paul
MONTANA Helena Oct 5 Sec, Dr S A Cooney Helena
NEW YORK Albany Buffalo New York and Syracuse Oct 4-7 Assistant Prof Examination Mr Herbert J Hamilton Albany
PORTO RICO San Juan Oct 5 Sec Dr M Quevedo Baez San Juan
RHODE ISLAND Providence Oct 7-8 Sec Dr Byron W Richards Providence

volumes form an excellent text for schools, each chapter being followed by a number of questions for review The work is graded so that the final chapters of the second book are well adapted to higher grades and older years

THE DAWN OF MODERN MEDICINE An account of the Revival of the Science and Art of Medicine Which Took Place in Western Europe During the Latter Half of the Eighteenth Century and the First Part of the Nineteenth By Albert H Buck B A M D Consulting Aural Surgeon New York Eye and Ear Infirmary Cloth Price $5 Pp 288 with illustrations New Haven Yale University Press 1920

Professor Buck's earlier work on the "Growth of Medicine" was reviewed in this department several years ago The present book is a continuation of that volume, amplifying some of the points there brought out, and bringing up many new points which receive but scant attention in other works on medical history The book is arranged according to geographic distribution It discusses the medicine of the various portions of Europe in middle ages in relation to the special chapters, however, deal with smallpox the development of surgery, and which the great advances were made with the growth of hospitals and teaching institutions The style of the author is pleasing biographic facts being frequently supplemented by philosophic editorial comment and extensive quotation To those interested in medical history —all physicians should be—the book will be not only an instructive but also an interesting companion for leisure hours It is well illustrated and exceptionally well printed

THE MICROBIOLOGY AND MICROANALYSIS OF FOODS Albert Schneider M D Ph D Profes or of Pharmacognosy College of Pharmacy University of Nebraska Cloth Price $3 50 net Pp 262 with 131 illustrations Philadelphia P Blakiston's Son & Co 1920

In the complex civilization of the present, when such a large proportion of the population is in cities the problem of food supply assumes great importance to the physician as well as to the consumer of foods In late years many serious epidemics have been accredited to contaminated foods Fortunately, methods for the detection of the unfitness of foods for human use are for the most part known It remains only for the systems of inspection to be adequate to protect the public health from most of the diseases due to this source The microbiology of foods is a subject of great complexity In a book of but 262 pages such a broad proposition must necessarily be treated briefly and in some directions superficially This book discusses the decomposition changes which may take place in foods the principal groups of organisms concerned in food spoilage foods that are especially liable to be harmful or dangerous and special and general microanalytic methods Chapters are included on the microanalytic rating of food products and legal standards of purity The books will be of interest to dietitians nutrition experts canners microanalysts and others interested in the control of stored foods

Medicolegal

Liability for Malpractice Regardless of License

(Hansen Pock (Mont) 187 Pac R 2)

The Supreme Court of Montana says that it is the rule recognized by the courts generally, that when one holds himself out as a physician or surgeon, whether licensed or not and accepts employment as such to treat a patient he assumes toward the patient the obligation to exercise such reasonable care and skill in that behalf as is usually exercised by physicians or surgeons of good standing of the same system or school of practice in the community in which he resides having due regard to the condition of medical or surgical science at that time It will be observed that under the rule is to be determined by an answer to the inquiry whether he has pursued the rules and regulations of the system or school to which he belongs The law however, is not concerned so much about the school to which he claims to belong nor where he gained the qualifications necessary to enable him to practice It is concerned about the fidelity with which he has met his obligations, and whether he has acquitted himself in the treatment of the particular patient, according to the measure of the standard of those of recognized schools who practice in the same or similar communities For example, in the case of *Nelson v Harrington* 72 Wis 591 40 N W 228 the court was called on to decide the question whether one who holds himself out as a clairvoyant physician, there being no recognized school designated as a clairvoyant school having fixed principles or formulated rules for the treatment of diseases, should be held to the standard which is applicable to ordinary physicians The court concluded that, there being no recognized school of clairvoyant medicine the defendant was properly held liable by the trial court, on the ground that having held himself out as other physicians he had not met the requirements of the rule of law applicable to them So the Supreme Court of Missouri in *Longon v Weltmer* 180 Mo 323 79 S W 655 held that a magnetic healer was liable to a patient to whom the defendant administered treatment which in the opinion of ordinary physicians, could not be justified by the rules of recognized schools though they knew nothing of the principles of magnetic healing In the case of *Musser's Exr v Chase* 29 Ohio St 577, the Supreme Court of Ohio held that a farmer who held himself out as a cancer doctor having skill and experience in the treatment and cure of cancer came within the rule which requires the exercise of such skill and care as are usually possessed and employed by the general physician in the treatment of such maladies" In the case here before the court, plaintiff Hansen had been suffering from pulmonary tuberculosis some twenty years so that the disease had become chronic He was led to consult the defendant a Chinese herb doctor, by having his attention accidentally called to an advertisement of the latter in a newspaper which read 'Dr Hune Pock Professional services to the public and a guaranty of a sure cure for all kinds of diseases including chronic cases of long standing etc The defendant examined him superficially by feeling his pulse and inspecting his tongue, though Hansen gave him a history of his case, telling him that he suffered from hemorrhages due to tuberculosis The defendant made no examination of his lungs, nor did he test his sputum or urine, informing him that his trouble was not tuberculosis but a disease of the kidneys which he could cure Hansen thereupon put himself under the defendant's care for treatment and took the medicine prescribed by the defendant prepared from herbs which the defendant stated had been brought from China Realizing after nearly seven months that though he had not suffered from hemorrhage his condition was not being improved but he was growing weaker Hansen ceased to visit the defendant and to take his medicine The defendant's evidence showed conclusively that he was simply a charlatan without skill or scientific knowledge who made it his business to practice on the ignorant and unwary for gain and while the evidence tending to show that the plaintiff was injured and the amount of damages he was entitled to recover was not very satisfactory, it did furnish a basis for the inference that he suffered some injury The court thinks that the amount of the verdict, $2 500 was excessive, but as no complaint was made of it on that ground the court does not think that it should disturb it

Physical Examinations Under Workmen's Compensation Law

(Texas Employers Ins Ass'n Downing (Texas) 218 S W R 11?)

The Court of Civil Appeals of Texas holds that while in the ordinary case the court is without power to order a physical examination without the consent of the plaintiff, authority to do it is given by the workmen's compensation law of Texas The court says that it thinks it clear that it was the intention of the legislature that the provisions for physical examination should be applicable after the proceeding should have been transferred to the courts as well as while it was pending before the industrial accident board The court has found no authority which denies the consti-

tutional power of the legislature to enact such laws, and it concludes that the court had the power to order such an examination as was asked in this case, in which a motion was made by the defendant insurance association for an order requiring plaintiff Downing to submit himself for examination before a committee of three physicians, to be named by the court one of whom should be a roentgenologist, and one an eye and ear specialist Article 5246—42 of the law gives the association the privilege of having a physical examination made by a physician of its own selection The law does not expressly provide how this privilege shall be enforced nor the penalty for refusal The court takes it that in case of refusal the association should apply to the board or court having jurisdiction of the case, for an order for the examination and it would then be the duty of such tribunal to provide therefor under the power granted by the first paragraph of the section It is probably true that the association before it could complain of the action of the court in refusing to order an examination under its general discretionary authority would be required to allege that it had requested an examination and been refused But when the proceeding has reached this stage that is request for examination by physicians named by the defendant has been made and refused by the plaintiff, the court thinks that the defendant may then apply to the general power of the court, rather than insist on an examination s being made by physicians of its own choosing When the examination is to be made under the order of the court it would seem obvious that an examination by disinterested experts chosen by the court would be more conducive to the ascertainment of the truth than that of physicians selected by the plaintiff's antagonist, whose examination and opinions are more likely to be partisan and in the ordinary case it is more appropriate to request the court to name the examiners The court is therefore of the opinion that if the facts were sufficient to show that an examination was reasonably necessary to a proper development of the truth of the issues for trial, the defendant ought not to be precluded from complaining of the abuse of the discretion of the court in refusing to order the requested examination merely because the defendant requested the court to appoint physicians, instead of naming the physicians itself in the motion

Important Part of Medical Practice Act Not Covered

(Peoples v. Hallam (Ill.), 126 N. E. R. 120)

Society Proceedings

COMING MEETINGS

Am Acad of Ophthal and Otolaryng Kansas City Mo Oct 14 16
Amer Assn of Electro Therapy & Radiology Atlantic City Sept 14 17
Amer Assn of Obstetricians and Gynecologists, Atlantic City Sept 20 22
American Association of Railway Surgeons Chicago Oct 6 8
American Child Hygiene Association St Louis Mo, Oct 11 13
American Public Health Association San Francisco Sept 13 17
American Roentgen Ray Society Minneapolis Sept 14 17
Colorado State Medical Society Glenwood Springs Sept 7 9
Delaware State Medical Society Wilmington Oct 11 12
Indiana State Medical Association South Bend Sept 23 25
Kentucky State Medical Association Lexington Sept 27 30
Medical Association of the Southwest Wichita Kan Sept 27 29
Minnesota State Medical Association St Paul Sept 29 30
Missouri Valley Medical Society of the Omaha Neb Sept 6 7
New England Surgical Society Providence R I Oct 6 7
New Mexico Medical Society Roswell Oct 15 16
Pennsylvania Medical Society of the State of Pittsburgh Oct 4-7
Utah State Medical Association, Ogden Sept 7 8
Vermont State Medical Society Rutland Oct 7 8
Washington State Medical Association Tacoma Sept 16 17
Wisconsin State Medical Society of La Crosse Sept 8 10

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Syphilis, St Louis

July 1920 4 No 3

Recognition of Syphilis and the Syphilitic W W Graves St Louis —p 402
Initial Lesion and Its Differentiation from Other Lesions J Grindon St Louis —p 407
Early and Late Skin and Mucous Membrane Reactions M F Engman St Louis —p 412
Reactions of Bones and Joints A E Horwitz St Louis —p 426
Reactions of Ear Nose and Throat W E Sauer St Louis —p 430
Reactions of Ocular Apparatus W F Hardy St Louis —p 438
Reaction of Cardiovascular Apparatu E S Smith St Louis —p 445
Reactions of Alimentary Tract and Extra Abdominal Viscera R W Mills St Louis —p 453
Reactions on Nervous System F R Fry St Louis —p 462
Reaction of Lung L C Boislinniere St Louis —p 466
Reactions in New Born and Growing Child P C Jeans St. Louis —p 473
[illegible] St Louis —p 480

cent of tabetic cases, while lassitude (general tire and weakness) was the next commonest complaint in cerebrospinal syphilis The remaining symptoms are pretty well scattered It is interesting to note that 9 per cent of the total cases gave a history of trauma as the exciting cause of their symptoms, among the secondary complaints Here again pain is the most prominent symptom but close to it comes difficulty in walking (38 per cent in tabetics and 19 per cent in cerebrospinal syphilitics), 26 per cent of all cases have some bladder difficulty, and this is about equally prominent in each group Impaired sexual power, numbness of the extremities girdle sensations, failing vision weakness and lassitude, are the next most frequent complaints in tabes In cerebrospinal syphilis failing vision failing memory loss of consciousness, and vertigo are the next most prominent symptoms while paretics gave a history of mental symptoms and speech difficulties In analyzing the objective physical findings, the pupillary signs sensory changes and abnormal reflexes were the most frequent

Archives of Dermatology and Syphilogy, Chicago

August 1920 2 No 2

*Nocardiosis Cutis Resembling Sporotrichosis Report of Case W H Guy Pittsburgh —p 137
*Histogenesis of Molluscum Contagiosum L B Kingery Ann Arbor Mich —p 144
*Prolonged Ice Box Versus Short Water Bath Incubation in Wassermann Reaction W Burdick Denver —p 163
*Malignant Degeneration in Benign Dermatoses C M Williams New York —p 168
*Production of Tumors in Absence of Parasites E F Smith Washington D C —p 176
*Roentgen Rays or Radium Combined with Excision in Treatment of Keloids G E Pfahler Philadelphia —p 181
*Effect of Mercury Salicylate on Wassermann Reaction H Goodman New York —p 193
*Follicultis Decalvans and Lichen Spinulosus Report of Cases F F Senear Chicago —p 198
*Association of Herpes Zoster and Varicella F L McEwen Chicago —p 205
Syphilis in English Colonies of North America J L Lane New Haven Conn —p 215

Nocardiosis Cutis—A case that agrees with the description of sporotrichosis clinically but which was found to be caused by an organism other than the sporotrichium of Schenck, is reported by Guy

Molluscum Contagiosum—Kingery points out that an abundance of clinical and pathologic evidence favors the existence of the analogue of molluscum contagiosum in fowls Presumptive evidence points to the identity of molluscum contagiosum in man and molluscum epitheliale in lower animals Final proof of the development of molluscum contagiosum from the surface

Icebox Incubation in Wassermann Reaction—Burdick says prolonged twelve hours, primary icebox incubation possesses decided advantages over the short period one-half hour incubator or water bath treatment Serums giving doubtful reactions by the later method of primary incubation frequently are frankly positive by the former method In the series studied both methods gave uniformly negative results in 100 per cent of the clinically nonsyphilitic cases and positive results in 100 per cent of the second stage untreated cases In the second stage treated cases, however, there was a decided difference, especially in the higher percentage positives obtained by the prolonged primary icebox incubation method Likewise this method gave a decidedly higher percentage of positives in the third stage untreated (attaining 100 per cent as compared to 55 per cent by the half-hour water bath method) and the third stage treated cases In the examination of spinal fluids from patients cerebrospinal syphilis there frequently is obtained a positive reaction by the prolonged icebox incubation whereas the conventional water bath method may be negative

Malignant Degeneration of Dermatoses—There are many causes which lead to keratoses and scars and keratoses and scars are more prone to malignant degeneration than is normal skin, but Williams says the number of keratoses and of scars is so enormous and the number of epitheliomas relatively so small that the danger in each individual case is slight indeed Physicians should aim to prevent the formation of these precancerous conditions, to watch and protect them when they appear, to remove them when exposed to injury or when they show signs of changing their character But to recommend the removal of every scar, every naevus, every keratoma, when every person has at least one of these blemishes or to frighten the public with tales of the menace of such growths, is not justified by the facts

Tumor Production by Limiting Oxygen Intake—Smith has produced hyperplasias (1) by the direct application of dilute acids and alkalis to susceptible plant tissues, (2) by the introduction into the tissues of certain foreign organisms (especially the crown gall bacterium which produces acids and alkali in flask cultures and probably also inside the cells as a result of its metabolism), and (3) Smith can now bring about the same results in the absence of parasites and their products by limiting the intake of oxygen, thus compelling the cells themselves to manufacture the stimulus which leads to the development of hyperplasias He suggests that this might take place only as the result of an anaerobic cell respiration acting on the youngest most active cells of a tissue, but there must be always some oxygen of the air present, otherwise there will be complete asphyxiation of the tissues as happened in my first experiments Probably overgrowths due to freezing and to mechanical injuries will also be found to depend on local interference with cell respiration

Radiotherapy of Keloid—Either the roentgen rays or radium can be depended on for the reduction of a keloid The best results will generally be obtained when radiotherapy is combined with excision

Effect of Mercury Salicylate on Wassermann Reaction.—Eighty-seven previously untreated latent syphilitic patients with 4 plus Wassermann reactions were given 1 gram of mercury salicylate intramuscularly at weekly intervals for courses of from six to eight injections The Wassermann reaction immediately after treatment remained strongly positive in 66 per cent of the cases In only 9 per cent was there a reversal to negative and in some such patients who were given a third Wassermann test after an interval without treatment the reaction was positive Goodman says it seems fair to conclude with Nelson and Anderson who carried on a similar study in 1915 that mercury salicylate alone in the dosage and for the period given does not qualify as a curative agent in syphilis In the future he will use mercury salicylate in increasing doses up to 2 and 2 5 grains weekly in an effort to learn whether mercury salicylate in larger doses is effective

Follicultis Decalvans—Senear's four cases occurred in women aged respectively 55 43 43 and 30 years In all four follicultis decalvans was of long standing (ten two ten and twenty-one years respectively) followed by the rather sudden development of follicular eruption of the body whose clinical picture was that of lichen spinulosus Senear supports Adamson's theory of a toxic etiology

Herpes Zoster and Varicella—McEwen reports the cases of a man with zoster who developed varicella which he passed on to a daughter not otherwise exposed and presents certain recommendations deduced from an examination of the literature on this particular association which he says, if followed, would contribute to the clarification of a subject on which there is now great confusion

Archives of Diagnosis, New York

April 1920 12 No 4

Study of Thirty Five Cases of Typhoid and Paratyphoid H J Smyly —p 213

Bulletin of Johns Hopkins Hospital, Baltimore

July 1920 31 No 353

Striking Elevation of Temperature of Hand and Forearm Following Excision of Subclavian Aneurysm and Ligations of Left Subclavian and Axillary Arteries W S Halsted Baltimore —p 219
*Bacillary Dysentery in Children W C Davison Baltimore —p 225
Behavior of Syphilitic and Normal Serums Toward Certain Colloidal Solutions V R Mason Baltimore —p 234
In Experimental and Clinical Therapeutic Study of Whooping Cough D I Macht Baltimore —p 236
Pigmented Epithelium of Embryo Chick's Eye Studied in Vivo and in Vitro with Special Reference to Origin and Development of Melanin Pigment D T Smith Baltimore —p 239

Elevation of Surface Temperature Following Resection of Aneurysm.—In 1918 Halsted ligated the left subclavian and carotid arteries near their origin from the aorta for the cure of a huge subclavian aneurysm For a year the aneurysm decreased steadily in size Then it increased in size and developed a faint pulsation It was finally excised and the subclavian and axillary arteries were ligated it was noticed that the left hand and forearm, which for two years had been strikingly cold, had become abnormally warm—appreciably warmer than the corresponding limb About five weeks after operation the hand and forearm became cold again—at first in small areas—remaining cold for only a day or two The sixty-ninth day after the operation, the back of the left hand was quite cold whereas the left palm was about as warm as the right The temperature of the hand and forearm varied from day to day and from hour to hour, certain small quite well-defined areas remained uniformly cool, otherwise the hand and forearm maintained their normal warmth The case is described in full, and Halsted also translates one of the papers of Leriche on periarterial sympathectomy and its results published in the *Presse medicale,* April 20, 1916

Causes of Bacillary Dysentery—The material for Davison's report consisted of the study of 134 cases of diarrhea More than 80 per cent of acute cases of ileocolitis were due to infection with *B dysenteriae B dysenteriae* (either Flexner or Shiga) was not found in the stools of sixty-three cases of simple diarrhea nor in those of 100 normal children Davison suggests that the name ileocolitis should be changed to dysentery in children and the disease made reportable to the health authorities The agglutination reactions of the patient's serum by standardized technic is of assistance in the diagnosis of dysentery *B morgani* No 1 *welchii B paracyaneus B proteus* and the *Streptococcus fecalis* are not the cause of dysentery (ileocolitis) or diarrhea

Benzyl Benzoate in Whooping Cough—The number of cases studied by Macht was about 115 All these cases were characterized by whooping and in many the paroxysms were accompanied by vomiting and small hemorrhages Most of the patients before coming under Macht's observation had been treated by parents or doctors with paregoric and other popular drugs without any benefit, while others had been left alone without any treatment whatever A number of the patients received vaccine treatment but the results in these cases were also not at all striking All other medication was discontinued and the patients were given a 20 per cent solution of benzyl benzoate by mouth The dosage varied from 5 to 40 drops in water, three or four times a day and oftener depending on the age of the patient and the severity of the disease In cases in which the simple alcoholic solution of benzoate was found to be too distasteful to the young patients, it was flavored with a few drops of benzaldehyd and the medicine was administered in sugar, water or milk The addition of a little benzaldehyd to a solution of benzyl benzoate in amounts varying from 1 to 5 per cent produced a mixture which seemed to act more effectively in cases of whooping cough than benzyl benzoate alone It was found that the administration of benzyl benzoate in the form of a suspension in simple elixir in syrup of yerba santa and other syrups or elixirs was not a satisfactory method either of disguising the taste or administering the drug over long periods of time About 90 per cent of all the patients showed more or less beneficial effects about 50 per cent exhibited marked improvement in the symptoms The therapeutic effects of benzyl benzoate were not of a curative character but were of a distinctly palliative nature

Florida Medical Association Journal, St Augustine and Jacksonville

July 1920 7 No 1

Surgical Treatment of Congenital Hypertrophicpyloric Stenosis J S Helms Tampa—p 1
American College of Surgeons F H Martin Chicago—p 4

Journal of Parasitology, Urbana, Ill.

June 1920 6 No 4

Sarcocystis Tenella Railliet J W Scott—p 157
Life Cycle of Two Species of Acanthocephala from Freshwater Fishes H J Van Cleave Urbana—p 167
Source of Infection of Dog and Cat with Echinochasmus Perfoliatus (V Ratz) and Infection of Man with Distomes of the Family Echinostomides J Ciurea—p 173
Structure of Some Microsporidian Spores R Kudo—p 178
Abnormal Courses of Infection of Paragonimus Ringeri S Yokogawa and S Suyemori—p 183
A Newly Discovered Parasitic Nematode N A Cobb—p 188
Criteria for Differentiation of Schistosome Larvae E C Faust—p 192
*Gamasid Mite Annoying to Man H E Ewing Washington D C—p 195

Gamasid Mite—Ewing describes a small gamasid mite (*Halictastes missouriensis* Ewing) that gets on the skin of the legs, and for that matter on any part of the body, and causes a considerable annoyance and a 'creepy' sensation by running about over the skin In addition to the annoyance thus occasioned, the mites have a faculty of stopping in the folds of the skin and inserting their mandibles, thus causing actual pain At present it has not been determined whether they engorge blood from man or not

Medical Record, New York

August 7 1920 98 No 6

*Diagnosis and Treatment of Recurrent Cholecystitis without Stones M Einhorn and W Meyer New York—p 211
Allergy Anaphylaxis and Immunity in Hay Fever and Asthma W Scheppegrell New Orleans—p 216
Relation of Teeth to General Medicine L M Gompertz New Haven Conn—p 217
Study of Man After Death A MacDonald Washington D C—p 219
*Bordeaux Conception of Lethargic Encephalitis or Epidemic Encephalomyelitis R Cruchet—p 225
Epidemic Encephalitis E D Friedman New York—p 226
Clinical Localization of Vermiform Appendix A Abrams San Francisco—p 229

Recurrent Cholecystitis—The basis of this paper are eighteen cases of recurrent cholecystitis without stones in which operation was performed and in this way the diagnosis corroborated per autopsiam in vivo Einhorn states that a diagnosis of chronic recurrent cholecystitis can frequently be made even when stones are absent by the symptoms present in conjunction with a direct examination of the bile When operating for cholecystitis he advises that a chronically diseased gallbladder should be excised even if no stones are found in the affected organ As to the surgery of the gallbladder Meyer states that so far as indications point today it appears to be better surgery to extirpate the infected gallbladder without stones than to drain or leave it in place Such a bladder stitched to the abdominal wall though at first drained for quite some time may in the future come to represent an infected focus from which the system is intermittently flooded with toxins If secondary cholecystectomy is refused by the patient chronic pancreatitis may develop in addition to the chronic recurring cholecystitis and invalidism may develop for the remainder of life The results accruing from cholecystectomy are almost as good as those of appendectomy

Lethargic Encephalitis—The Bordeaux conception of lethargic encephalitis or rather epidemic encephalomyelitis (or Cruchet's disease as it is still called in the Gironde region) is that which has been adopted in England, the United States Spain and the South American countries accepted first in France in the great local centers such as Lyon Nancy and Bordeaux, it has finally been accepted also in Paris

Minnesota Medicine, St. Paul

August 1920 3 No 8

*Auricular Fibrillation and Life Expectancy F A Willius Rochester Minn—p 365
*Therapeutic Application of Benzyl Alcohol Benzoate and Some Homologous Compounds A D Hirschfelder Minneapolis—p 380
*Blood Transfusion Methods and Indications with Special Reference to Sustaining Value of Repeated Blood Transfusions in Pernicious Anemia F H K Schaaf Minneapolis—p 382
Conditions Contra Indicating Operation with Stone in Kidney and Ureter W F Braasch Rochester Minn—p 387
Use of Thomas Bed Knee Splint for Routine Treatment of Fracture of Shaft of Femur W H Cole St Paul—p 391

Mortality in Auricular Fibrillation—An analysis of 500 cases by Willius has shown that the mortality attending auricular fibrillation doubles and in some groups trebles that occurring in similar types of heart disease not complicated

by this arrhythmia It is logical to conclude, therefore, that patients suffering from heart disease in whom auricular fibrillation has not occurred have a considerably greater life expectancy

Better Way to Give Benzyl Benzoate—To overcome the unpleasant, bitter, burning taste of the alcoholic solution of benzyl benzoate Hirschfelder gives pure benzyl benzoate, 10 parts, emulsion of acacia, 5 parts, elixir eriodictyon aromaticum (N F), 35 parts, dose, one teaspoonful He has been able to secure relief of symptoms in a considerable number of cases of conditions caused by spasm of smooth muscle, cardiospasm pylorospasm, pain in gastric ulcer from aspastic constipation The relief occurs within half an hour after taking and lasts Benzyl benzoate brings about relief in many but by no means all, cases of bronchial asthma, just as is true of atropin or other drugs that inhibit the vagus Still more striking results have been obtained in the treatment of dysmenorrhea About 80 per cent of the patients have had relief from pain after from one to three doses

Blood Transfusion—The sodium citrate method is the method of choice, Schaaf says especially in hemophilia, purpura and melena neonatorum In cases of severe streptococcic infections transfusion is of no value but in low grade subacute infections and in toxemias, it will increase the patient's resistance and help toward recovery In pernicious anemia in a majority of cases it will produce immediate general improvement and facilitate feeding by increasing the appetite and causing the disappearance of nausea and other symptoms annoying to the patient when other therapeutic measures would require weeks to produce the same efforts In many cases of pernicious anemia transfusion may cause a remission but whether by direct stimulation of the bone marrow or indirectly by improving the general condition and circulation has not been decided Transfusion may have to be repeated again and again to keep the patient alive until another remission occurs In pernicious anemia the transfussion of blood has a decidedly beneficial influence but has no curative value whatsoever

Missouri State Medical Association Journal, St Louis

August 1920 **17** No 8

Pathology and Surgical Treatment of Peripheral Nerve Injuries R D Irland Kansas City Mo—p 307
Symptomatology and Diagnosis of Nerve Lesions G W Robinson Kansas City Mo—p 313
*Summer Diarrhea of Infants J Zahorsky St Louis—p 317
*Feeding of Athreptic Infants M J Lonsway, St Louis—p 319
Neurological Reactions in Gonad Insufficiency F M Barnes Jr St Louis—p 323
Physical Defects Found in School Child W H Thaler St Louis—p 326
High Blood Pressure as Factor in Insomnia J F Chandler—p 330

Summer Diarrhea of Infants—An examination of the stools of more than 300 infants suffering from diarrheal diseases has convinced Zahorsky of the value of such examination in differentiating the functional from the inflammatory varieties of diarrhea It has become a routine practice with him to examine all stools in regard to their cell content In the treatment of these diarrheas he has been impressed with the clinical value of fruit juices with the water in these cases—orange juice grape juice, apple juice and peach juice have been used

Feeding Athreptic Infants—The essential points brought out by Lonsway are first, the condition depends on starvation which may be due to insufficient food vomiting, or failure of absorption because of diarrhea These, in turn, result in circulatory disturbances with more or less functional incapacity of practically all the vital organs The condition may be prevented by proper attention to the feeding emphasizing the importance of breast milk or if this is not obtainable a properly modified cow's milk mixture The treatment consists of administering a food which can be given in sufficient amounts to achieve a gain in weight without causing a digestive upset Breast milk is always to be preferred, but if this is not available an excellent substitute is whole lactic acid milk with added carbohydrate in the form of corn syrup This mixture can be given in large amounts over long periods of time with the happiest results

Ohio State Medical Journal, Columbus, Ohio

August 1 1920, **16**, No 8

Therapeutic Possibilities of Blood Transfusion Methods Indications and Results E R Arn Dayton—p 566
Medical Aspects of Blood Transfusion L A Levison Toledo—p 571
*Craniocerebral Injuries T S Jackson Cleveland—p 574
Problem of Forceps Prehension in Obstetrics W Gillespie Cincinnati—p 578
Lesions of Prostate and Their Treatment H P Pomerene, Canton—p 584
Acne Vulgaris C J Shepard Columbus—p 588
Observation Management and Treatment of the Cataract Patient Before and After Operation W H Snyder Toledo—p 589
Choice of a One Stage or Two Stage Operation for Cataract R Sattler Cincinnati—p 592
*Old and New Technic in Operating for Removal of Cataract D T Vail Cincinnati—p 594
Health Insurance is Impracticable from Viewpoints of the Three Groups Vitally Concerned O I Geier Cincinnati—p 601

Brain Injury Causing Hemianopsia—Jackson reports the case of a soldier who sustained a severe head injury A large fragment of shell case entered the right occipital lobe carrying with it a portion of cap hair and bone fragments The patient was received twelve hours after injury in a semiconscious condition Jackson excised the wound and removed all damaged skull tissue, but could not follow out the en bloc method as the hole was too large and stellate lines of fracture radiated from the wound The damaged brain, indriven bone fragments and foreign bodies were removed, the tentorium being exposed in the process A few months after operation about the only real signs of his wound were the deep occipital depression and an almost complete hemianopsia

Removal of Cataract—The object of Vail's paper is to encourage those who undertake the operation for cataract to adopt Smith's method throughout in every case where the lens will show a disposition to be borne without strain and to furnish a method to fall back on in case of imminent disaster, and also to teach that the best time to operate for cataract is before blindness and senility have set in The rule he adopts is to operate when the patient can no longer read newspaper print with his best glasses in ordinary light

Psychobiology, Baltimore

June 1920 **11** No 3

Need for Analytical Study of Maze Problem J F Dashiell, Chapel Hills N C—p 181
Effect of Alcohol on Hand and Eye Coordination K Dunlap—p 187
Psychologic Effects of Deprivation of Oxygen Deterioration of Performance as Omdocated by a New Substitution Test H M Johnson and F C Paschal Mitchel Field L I N Y—p 193
Momentary Character of Ordinary Visual Stimuli P W Cobb Mitchel Field Garden City N Y—p 237
Relative Distance as a Factor in White Rats Selection of a Path J E De Camp—p 245
Interrelation between Habit Formation and Feeling Qualities of Voluntary Movements L W Kline—p 255

South Carolina Medical Ass'n Journal, Greenville

July 1920 **16** No 7

Gastric Lavage G M Niles Atlanta Ga
Folliculosis vs Trachoma in our Schools A Warning J W Jervey Greenville—p 167
Diagnosis of Pulmonary Diseases in Children W P Cornell, Columbia—p 176

Texas State Journal of Medicine, Fort Worth

July 1920 **16** No 3

Ethmoid Problem R H Skillern Philadelphia—p 116
Surgical Problems in Otologic Work E R Carpenter Dallas—p 121
*Two Atypical Cases of Acute Mastoiditis W D Jones Dallas—p 123
Report of Selected Cases of Foreign Bodies in Bronchi and Esophagus J L Burgess Waco—p 128
Abortive Treatment of Peritonsillar Infection W R Thompson Fort Worth—p 129
Status of Tonsillectomy in Texas S N Key Austin—p 130
Plea for More Careful Tonsil and Adenoid Operation F Boyd Fort Worth—p 131
Tonsil Operation with Special Reference to Hemorrhage Control G S McReynolds Temple—p 132

Atypical Mastoiditis—In one of the cases cited by Jones, if there was any drainage at all from the mastoid, it was through the eustachian tubes as the patient had never had a paracentesis or rupture of the drum membrane In the second case the ear had not discharged for three weeks and showed only a slight redness in Shrapnell's membrane, and sagging of the posterior superior canal wall

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Journal of Experimental Pathology, London

February 1920 1 No 1

Is Hemolyzed Blood Toxic? W M Bayliss—p 1
Determination of Reaction of Bacteriologic Culture Mediums J McIntosh and W A M Smart—p 9
*Sympathetic Fever and Hyperpyrexial Heat Stroke W Cramer—p 31
*Serologic Classification of Meningococci P Fildes—p 44
*Testing of Renal Efficiency Observations on Urea Coefficient H Maclean and O L V de Wesselow—p 53
Simple Method of Recording Automatically Gas Produced by Bacteria in Culture and of Oxygen Absorbed by Aerobic Non Gas Forming Bacteria A Fleming and F J Clemenger—p 66
Litmus Solution Suitable for Bacteriologic Purposes J McIntosh—p 70

Is Hemolyzed Blood Toxic?—No evidence was obtained by Bayliss that hemoglobin or any other product of hemolysis is toxic If the blood pressure is low the renal secretion may be reduced but it can be restored by injection of gum saline Hemoglobin in solution serves as a carrier of oxygen When hemolysis is produced by transfusion of incompatible blood the serious results are not to be ascribed to the hemolysis as such but probably to some effect of foreign protein allied to anaphylaxis Rabbits are not to be used for experiments of the kind described because of their frequent death by intravascular clotting and the irregularity of this reaction

Experimentally Produced Fever or Heat Stroke—A short but virulent fever can be produced by the subcutaneous injection of B-tetra-hydronaphthylamin The temperature rises within one hour of the injection and the animal dies in hyperpyrexia with convulsions and deeply congested lungs The dose necessary to produce this effect depends on the climatic conditions under which the animal is kept Thus a dose which will kill a mouse in a warm room will have no effect in a cold room Again a small dose which has little effect even in a warm room will produce a fatal pyrexia if ten or twelve animals are crowded together in the cage It is argued by Cramer that this is an experimental "heat-stroke comparable to that in man—namely, a deficient cooling due to the environment acting on an organism which is under the influence of a hyperactive nervous system. In the treatment of heat stroke the importance of drastic cooling is emphasized Chloral and anesthetics are suggested as accessory aids to treatment Morphin aggravates the condition

Classification of Meningococci—A polyvalent meningococcus serum was absorbed with a number of strains of meningococci and then its agglutinating action was tested by Fildes on all of these strains The strains were then classified according to the effect they had on the one serum This is considered more satisfactory than classification by means of monovalent serums It was found that the cocci could be divided into two distinct groups and that each group was further divisible in two subgroups All cocci in the main groups displayed the characters of each of the subgroups to a greater or less extent A selection of standards for closely defining subgroup characters is an arbitrary proceeding and may lead to confusion if one and the same strain is not maintained as standard The use of monovalent serums will fail to reveal certain cocci as meningococci

Proteinuria Not Sign of Defective Kidney—The question of albuminuria is discussed by Maclean and Wesselow and evidence brought forward to show that the presence of protein in the urine is more common than is generally supposed Proteinuria by no means shows that the kidneys are defective in function and its significance as an indication of renal disease can only be ascertained when other efficiency tests are used as well In severe cases of interstitial nephritis the best indication of the extent of kidney damage is obtained by an estimation of the blood urea In normal individuals this should lie between 15 and 50 mg per hundred cubic centimeters of blood while in severe cases of nephritis it may rise as high as 200 to 300 mg per hundred cubic centimeters or even more The inability of the diseased kidney to excrete urea at a high concentration is utilized as a new test of kidney efficiency The patient empties the bladder and then swallows 15 gm of urea dissolved in water One and two hours afterward he passes water and these samples are tested for concentration of urea The test is a better indication of renal efficiency than others now in use An investigation on Ambard's coefficient showed that this test is of value only in bad cases where there is a definite accumulation of urea in the blood it has no advantages over a simple blood urea estimation A short scheme of the method now used by the Ministry of Pensions for the investigation of renal cases is given

April 1920 1 No 2

*Value of Mechanism of Colloidal Gold Test J Cruickshank—p 71
*Experimental Transmission of Lethargic Encephalitis to a Monkey J McIntosh and H M Turnbull—p 89
Conditions Which Are Conducive to Production of Shock by Histamin H H Dale—p 103
Comparative Oxygen Avidity of Normal and Malignant Cells Measured by Their Reducing Powers on Methylene Blue A H Drew—p 115
Etiology of Influenza P Fildes and J McIntosh—p 119
*Technic for Demonstration of Capsules of Bacteria S L Baker—p 127
*New Medium for Growth of B Influenza P Fildes—p 129

Value of Colloidal Gold Test.—The results of other workers regarding the value of the colloidal gold test in the diagnosis of general paralysis are confirmed by Cruickshank. The substance in the spinal fluid of general paralytics which causes precipitation of colloidal gold is not dialyzable and resides in the globulin fraction of the protein and in this respect resembles the Wassermann reacting substance It is not altered by heating to the coagulation point of protein The reaction is not due to peptone The various types of reaction can be simulated by mixtures of globulin and albumin, the globulin acting as a precipitating agent and the albumin as an inhibitory or protective one Syphilitic reactions are due to an amount of albumin sufficient to obscure partially the precipitating effect of the globulin As the globulins obtained from negative spinal fluids even when used in concentrated form, are almost inactive the precipitating action of paretic fluids cannot be ascribed solely to the increase in globulin, but is probably dependent on a specific alteration of the physical state of the globulin, which is associated with a positive electric charge Human serum globulin has the characters of a positive colloid but the paretic and syphilitic reactions of spinal fluids cannot be attributed merely to the passage of serum globulin into the spinal fluid The meningitic reactions, on the other hand may be due to the leakage of plasma through damaged meninges

Experimental Lethargic Encephalitis—McIntosh and Turnbull describe the reproduction of lethargic encephalitis in a Pafas monkey by combined intraperitoneal inoculation of filtered emulsion of cervical cord, pons and basal nuclei obtained from a fatal case On the sixth and forty-eighth days after inoculation the monkey had fits after the second fit it was lethargic rigid and trembling until death on the fifty-sixth day Macroscopic and microscopic examination revealed no lesions in the viscera An extensive microscopic examination of the central nervous system revealed engorgement hyalin thrombosis a very few hemorrhages into "perivascular canals edema of certain cranial nuclei extensive degeneration of bodies of neurons and an inflammatory infiltration confined to the posterior part of the left basal ganglia, focal areas of the cerebral pia and the wall of a vessel in the right trapezoid body In its strict localization its situation its distribution in the affected areas and in its cytology the infiltration resembled closely that in human cases A description is also given of the ambiguous result of similar inoculation of the emulsion unfiltered into a Macacus monkey

Stain for Capsule of Bacteria—A film of the bacterium preferably in suspension from agar is dried on a slide and a film of India ink superimposed The slide is then stained with hot gentian violet followed by iodin The bacteria are blue-black the capsule is colorless against the ink background

Medium for Growing Influenza Bacillus—A peptic digest of blood is neutralized and added to agar or broth The advantages are that initial materials need not be sterile it is rapidly prepared, has constant value, remains unchanged indefinitely giant growth An accurate adjustment of the reaction of the blood is essential

British Medical Journal, London

July 24, 1920, 2, No. 3108

*Surgical Treatment of Gastric Ulcer—B. G. A. Moynihan—p. 99
Diagnosis of Glaucoma—R. H. Elliot—p. 108
Blood Transfusion—A. Cooke and J. W. McNee—p. 111
Quinin and Its Related Alkaloids in Pharmacology and Therapeutics—W. E. Dixon—p. 113
Blackwater Fever in Macedonia—J. F. Gaskell—p. 122
Treatment of Lupus Vulgaris by Liquid Acids Nitrate of Mercury—H. G. Adamson—p. 123
Healing of a Trophic Ulcer of the Great Toe in an Aged Glycosuric Patient—H. C. Barlow—p. 124
*Method of Treating Hay Fever and Paroxysmal Rhinorrhoea—M. Agar—p. 125

Surgery of Gastric Ulcer—In 835 operations performed by Moynihan on 834 patients there were twelve deaths—a total mortality of 1.43 per cent. Excluding the cases of jejunal ulcer, 808 operations were done for gastric and duodenal ulcers with ten deaths—a mortality of 1.23 per cent. Posterior gastro-enterostomy was done most often, 660 times, with gastrectomy next in eighty cases. Excision of the ulcer was done forty-two times.

Silver Nitrate Applications in Hay-Fever—The method employed by Agar consists essentially in treating the vestibule of the nose with an astringent lotion, silver nitrate 30 grains to the ounce. The rubbing is carried out thoroughly and systematically, particular attention is paid to two spots, the first is high up on the outer wall and the second is the floor, from half to three-quarters inch back from the orifice. No part of the vestibule must be missed and the nostril must be stretched to open up the folds. No application is made to the mucous membrane. All patients with nasal rhinorrhea treated by this method have been cured. Good results are obtained also with patients suffering from hay-fever. Some cases of asthma have also been treated but the results have been less satisfactory, although some improvement has been obtained.

Japan Medical World, Tokyo

June 26, 1920, 10, No. 26

Pathology of Puerperal Eclampsia—K. Obata
*Amylolytic Enzyme Found in Cerebrospinal Fluid—Z. Saito

July 3, 1920, 10, No. 27

Anemia in Children—K. Takasu (To be continued)

July 10, 1920, 10, No. 28

Distribution of Some Enzymes in Blood of Some Animals—S. Ozawa, H. Nishiori, K. Hiruma and K. Hirota
Results of Practical Application of Influenza Vaccine (Pure Pfeiffer's Bacillus Vaccine)—T. Kitano

July 17, 1920, 10, No. 29

Vital Fixation of Auricular Organs and Staining of Nerves—F. Tanaka and C. Yoshida

Amylolytic Enzyme in Spinal Fluid—Saito found that the amylolytic power of the normal human cerebrospinal fluid is 0.001-0.004, while that of purulent cerebrospinal meningitis was not strong even if there were no remarkable changes in the fluid. The cerebrospinal fluid of tuberculous cerebrospinal meningitis possesses a remarkably increased amylolytic power. The fluid taken from a dead body had also a remarkably increased amylolytic power.

Lancet, London

July 31, 1920, 2, No. 5057

Toxic Idiopathies—J. Freeman—p. 229
*Psychology of Special Senses and Their Functional Disorders—A. F. Hurst—p. 235
Symptomless Influenzal (Streptococcal) Mastoiditis—C. Grantham Hill—p. 241
*Classification of Pulmonary Tuberculosis—L. S. Burrell—p. 242
Sulfarsenol in Treatment of Syphilis—F. C. Doble—p. 243
Pleural Obliteration a Complication of Artificial Pneumothorax—W. C. Rivers—p. 244
Vertigo: Its Relation to Errors of Refraction—C. E. Pronger—p. 245

Psychology of the Special Senses—Hurst concludes his Croonian lectures by stating that hysterical pain is a very real thing and cannot be distinguished from pain caused by organic disease by its character or by the absence of associated sympathetic phenomena. It may, for example, give rise to tachycardia, dilatation of the pupils, pallor, and sweating if the original organic pain did so because the afferent impulses excited by peripheral stimuli that the latter still produce marked effects, even if they are so slight that if the patient would cease to expect pain and so allow the normal resistance to return, they would either produce no effect at all or only an insignificant amount of pain and little or no sympathetic reflexes.

Classification of Pulmonary Tuberculosis—The classification Burrell suggests is based on the life history of the patient. The first stage A is subdivided into (1) the hospital stage, and (2) the sanatorium stage. The hospital stage includes patients in whom pulmonary tuberculosis has just been diagnosed and who require observation in hospital or in bed at home to enable the physician to determine the proper treatment and to see the patient's response to treatment. It may be regarded as the stage of initial rest. If the patient improves sufficiently to stand a sanatorium life he passes into the sanatorium stage. Here the patient remains until he reaches the stage of maximum improvement. He then passes into the second stage B. This includes all patients who, having received the maximum benefit from institutional treatment are holding their own but in whom the disease is not arrested. Stage 3 is the stage of decline and includes patients who are losing ground in spite of treatment. These stages are subdivided as follows. A. Stage of institutional treatment.—1. Hospital stage: a. In bed or up less than two hours a day. 2. Sanatorium stage.—a. Capable of less than half a day's work. b. Capable of half a day's work. 3. Capable of a full day's work. B. Stage of maximum improvement.—1. Capable of a full day's work. 2. Capable of part-time work. 3. Unable to work. C. Proof of decline.—1. Able to do some work. 2. Unable to work. 3. Bedridden.

Quarterly Journal of Medicine, London

July 1920, 13, No. 52

*Beriberi in Mesopotamian Force—C. A. Sprawson—p. 337
*Rectal Absorption of Glucose—K. H. Tallerman—p. 356
*Heart and Its Rhythm in Acute Rheumatism—J. Parkinson, A. H. Gro[illegible]se and F. B. Gunson—p. 363
Malignant Malaria in Macedonia—J. F. Gaskell and W. L. Millar—p. 381
Tetany and Administration of Alkalis—P. S. Henderson—p. 427
Adult Tetany and Methylguanidin—A. Methabolic Study—L. Findlay and J. S. Sharpe—p. 433

Beriberi—The results of Sprawson's observations are summarized as follows. The disease called beriberi is a syndrome which may arise from various causes under different circumstances. One class of case is not due to a food deficiency, but appears to result from an infection. Other cases are due to a vitamin deficiency in the food; this takes a few months to operate in a previously healthy subject and may be called primary beriberi. In yet another class the syndrome arises apparently from the effect of some depressing influence or secondary infection on a subject previously rendered susceptible to the disease. These cases may be considered to have been suffering from "latent beriberi." In all classes the clinical appearance is approximately the same there being differences only in the relative frequency of various manifestations in the three groups.

Rectal Absorption of Glucose—Experiments were made by Tallerman to detect any absorption of sugar administered per rectum taking place by an analysis of the blood a direct measurement in the rise of blood sugar being made after an injection of glucose by rectum. Solid glucose 60 gm. was dissolved and made up to about 180 c.c. with physiologic sodium chlorid solution. This was injected slowly into the rectum in the same manner as that used in ordinary rectal feeding. About ten minutes were taken over this injection, it was given in a single dose. He found that absorption does take place, the maximum being usually attained in about 1.20, the average rise at this being 0.03 per cent. With the exception of two cases the glucose was well retained and no ill effects resulted; there is therefore no reason to suppose that the high concentration of glucose used had an irritating or inhibitory effect on the gut but at the same time the concentration is probably a factor in the question of absorption.

Heart Disturbances in Rheumatism—Information was collected by Parkinson and others on the nature, incidence, and

significance of the acute disturbances in the myocardium observed during the course of a consecutive series of fifty cases of acute rheumatism In thirty-five cases the apex beat was palpable, and the heart increased in size in ten, decreased in ten increased ten decreased in three, and remained unchanged in twelve No definite relationship was found between the development of systolic murmurs at the apex and apparent enlargement of the heart Sinus arrhythmia was present after the attack in forty-seven of the fifty cases The authors conclude that the presence of sinus arrhythmia does not indicate that the heart has escaped infection Premature auricular contractions appeared in seven cases (14 per cent) Acute heart-block (a-v) developed in fifteen of the fifty cases proceeding to the degree of dropped beats in four (8 per cent) It often appeared quietly in the absence of other signs such as pyrexia and tachycardia, and it invariably disappeared during convalescence The general conclusions are that acute heart-block of some grade is common in acute rheumatism, that it indicates acute myocarditis, and that it may, therefore be premonitory of chronic myocarditis and eventual heart failure

Archives des Maladies de l'Appareil Digestif, Paris

April 1920 **10** No 8

Compression of Trachea from Aerophagia with Idiopathic Dilatation of Esophagus L Bard—p 449
*Painful Dilatation of Right Colon R Gregoire—p 456
*Paroxysmal Pain in Solar Plexus F Moutier—p 471
*Pathogenesis of Gastric and Duodenal Ulcer R Dahl—p 483

Painful Dilatation of Right Colon—Gregoire declares that dilatation of the colon induces pain liable to be mistaken for appendicitis although there is no specially tender point, the whole flank is painful The ptosis and movability may kink the bowel, and he is convinced that many severe disturbances in adults are traceable to ptosis of the colon in childhood which might have been easily remedied then The only appreciable manifestation of the ptosis is the dilatation and pain He reports five cases in children, from 12 to 16 years old, in which colopexy put an end to all disturbances He fastened the ascending colon to the posterior wall of the flank and the middle portion of the transverse colon to the abdominal wall The mesentery is usually abnormally long or not properly fastened Some of these patients get relief by reclining with the pelvis higher than the head, the colon thus sliding back into place The tissues are usually strong and the colopexy holds in the young

Physostigmin in Treatment of Abdominal Pain—Moutier advocates eserin (physostigmin) in treatment of sympathetic abdominal pain and vasomotor phenomena, with accessory secretory phenomena, independent of any organic lesion in stomach or intestines They are most common in persons with the ordinary symptomatic triad of neurasthenia, inanition and ptoses, but they may be encountered likewise with ulcer or colitis mitral stenosis or hyperthyroidism Atheroma of the aorta, and tumors interfering with the circulation in the abdomen may also be factors in these sympathetic paroxysms The pain and the pulsation in the aorta visible in the epigastrium, distinguish these solar crises In treatment he has found eserin most effectual giving 30 drops in the twenty-four hours, fractioned before meals of a mixture of 0 01 gm neutral physostigmin salicylate with 3 5 c c glycerin and 1 5 c c of distilled water to which alcohol is added Q S to 10 c c He begins with 10 drops and gradually increases to 60 drops and then reduces in the same way He never went above 60 drops The best results may be anticipated with sympathicotonia as was evident in nine cases he reports, in four others atropin proved more effectual

Origin of Gastric and Duodenal Ulcer—Summarized May 15, 1920 p 1432

Bulletin de l'Académie de Médecine, Paris

June 15 1920 **83** No 24

The Parkinson Syndrome in Lethargic Encephalitis P Marie and G Levy—p 539
Pott's Disease with Radicular Syndrome A Remond—p 547
*Cerium Salts in Treatment of Experimental Tuberculosis A Frouin—p 549

Salts of Cerium Earths in Experimental Tuberculosis—Frouin reports further experiments with intraperitoneal injection of sulphates of the cerium earths in fifty rabbits and thirty guinea-pigs after they had been inoculated with bovine tuberculosis The final outcome confirms, he says, what might be expected considering the inhibiting influence of these salts on cultures of tubercle bacilli and the reduction of the fat and wax content of the bacilli cultivated in the presence of these salts The animals injected developed sclerosis in the organs presenting signs of tuberculosis, and, with a few exceptions survived from two to five months longer than the controls In the rabbits, the tuberculous lesions in the lungs after inoculation in the ear remained restricted to the lungs In conclusion he states that the experimental data recorded explain the clinical results realized by Grenet and Drouin (mentioned in these columns July 24 1920, p 246 and 276)

Bulletin Medical, Paris

July 17 1920 **34**, No 36

Bilharziasis in French African Colonies Abbatucci—p 643
Tuberculous Peritonitis in Older Children H Stevenin—p 644

Bulletins de la Société Médicale des Hôpitaux, Paris

June 11 1920 **14**, No 21

*Argyria Guillemot Mme Michaux and H Duval—p 792
*Ether Injections in Whooping Cough J Audrain—p 795
*Administration of Epinephrin by the Digestive Tract Lesne—p 800
Lethargic Encephalitis Babonneix and others—p 801 828
*Emetin in Treatment of Asthmatiform Attacks R LeClerc—p 802
Typhus at Paris Contracted in Poland Netter and Salanier—p 804
*Diabetic Epilepsy G Guillain—p 808 Idem M Labbé—p 810
*Pernicious Anemia in the Tuberculous A Pisavy and others—p 812
*Secondary Diphtheria J Renault and P P Levy—p 816
*Electric Chorea. C Achard and L Ramond—p 823
Chronic Inflammatory Stenosis of Cardial Esophagus de Jong and Boulan—p 826
*Pulsus Alternans C Lian and R Boulot—p 832

Chronic Silver Intoxication—In the case of argyria reported, silver nitrate pills had been taken internally for tabes, a daily dose of 0 01 gm for ten years The tabes had developed unmodified, but aside from the indelible pigmentation of the derma, there did not seem to be any symptoms from the argyria

Ether in Treatment of Whooping Cough—Audrain gives an intramuscular injection of 1 c c of ether in treatment of whooping cough in infants, and 2 c c in older children, on alternate days and has always found it successful in arresting the disease except when adenoids are a factor in the spasmodic coughing In the discussion that followed, Dalche reported the attenuation of whooping cough in a young woman under three injections of ether but Courcoux reported a negative case in an infant of 2 months and Variot two negative cases in young children but the latter added two more positive cases to the list, the effect being a complete cure after four or five injections Audrain ascribes its action to its disinfecting properties

Epinephrin by the Rectum—Lesne cites research which has shown that rabbits can bear twice the fatal dose of epinephrin if it is injected directly into the stomach or small intestine but injected into the rectum the toxic action seems to approximate that with subcutaneous injection Neither pepsin nor pancreatin modifies epinephrin in the test tube, but the liver neutralizes its toxic action The liver barrier seems to arrest the epinephrin ingested while, given by the rectum thanks to the wealth of anastomoses of the hemorrhoidal veins it can pass directly to the vena cava system Hence he advises to give epinephrin by the rectum rather than by the mouth as the effect will be much greater and with a smaller dose

Emetin in Asthmatiform Attacks—In the two cases described by Le Clerc, pulmonary emphysema was responsible for the attacks resembling asthma in the boys of 10 and 14 He arrested the distressing attack with tartar emetic and then continued treatment with injections of from 0 02 to 0 04 gm of emetin daily for five days then suspension for five or ten days and then recommencing The mother continued to give the injections to the younger boy whenever there were symptoms of return of respiratory disturbance but after eighteen months it was never needed When last seen nearly three years later the child apparently entirely outgrown the tender [illegible] con-

parable to that recommended by Ramond in chronic bronchitis

Diabetic Epilepsy — Guillain reports a case of epileptic seizures developing for the first time in a soldier in the course of acute diabetes The seizures subsided under treatment of the diabetic acidosis, and with them the left hemiplegia which had developed at the same time In Labbe's four similar cases, the connection between the grave diabetic acidosis and the seizures was equally evident

Pernicious Anemia in Tuberculosis —Pissavy remarks that the case he reports differs from the few others on record in that the pernicious anemia was caused by tuberculosis of the mediastinal and mesenteric glands, the lungs being scarcely touched

The Schick Diphtherin Reaction in Contagious Diseases — Renault and Levy applied the Schick test to forty-two children with measles and forty-five with scarlet fever or other contagious disease, and found that secondary diphtheria could be foretold with certainty when the reaction was positive, with virulent diphtheria bacilli present in the environment, and the rhinopharyngeal mucosa inflamed, as is the rule in the eruptive diseases Secondary diphtheria does not develop if one member of this trio is lacking They expatiate on the useful information to be derived from the Schick reaction in connection with the clinical and bacteriologic findings

Electric Chorea —Achard and Ramond say that lethargic encephalitis has thrown light on the etiology of chorea It is probably responsible for certain cases of choreiform myoclonias and of acute chorea Dubini's electric chorea is probably identical with it but there is another form of electric chorea, the Henoch-Bergeron type, which differs completely from it, as they prove by the history of a case in 1904 It is mild and is cured by suggestion or tartar emetic, but it occurs in epidemic form Of Bergeron's seven cases, three were encountered in one week

Pulsus Alternans —Lian and Boulot noted pulsus alternans in ten of sixty persons with high blood pressure in a recent four month period In eight of the ten cases the alternans was not pronounced, but even in this form it is readily recognized when the sphygmomanometer cuff is inflated with a pressure equal to that of the maximal arterial pressure

Gynecologie et Obstétrique, Paris

1920 **1**, No 3

*Antityphoid Vaccination in the Pregnant Guerin Valmale and E Vayssiere —p 217
*Varicocele in the Adnexa A Chalier and C Dunet —p 239
*Total and Subtotal Hysterectomy De Rouville —p 250
Stereoradioscopy in Measurement of the Pelvis E Levy Solal —p 253
Caudal Appendage of Probably Amniotic Origin Two Cases A Laffont —p 266
Hermaphrodism in Man and Mammals A Lacassagne —p 273

Antityphoid Vaccination in the Pregnant — The experimental and clinical experiences related show that the pregnancy progresses the same in the vaccinated as in the non-vaccinated, and the fetus shows no injurious influence from the vaccination even during the last half of the pregnancy The fetal serum acquires agglutinating power although the placenta seems to interpose a barrier, the barrier yields more readily, the larger the amount of vaccine used

Tubo-Ovarian Varicocele —The varicocele can be differentiated by the appearance and disappearance of the tumor palpated according as the patient stands sits or reclines

Hysterectomy Both Total and Subtotal —De Rouville combines the advantages of both the total and subtotal technics by leaving the cervix but at the same time scooping it out to leave merely an empty shell Hemostasis is ensured by low ligation of both uterine arteries above the point where the vaginal branch diverges

Journal de Chirurgie, Paris

1920 **16** No 1 Rec'd July 1920

*Suboccipital Pott's Disease in Adults T Tuffier —p 9
*Circular Suture of Brachial Artery M Roussiel —p 18
*Pseudarthrosis of the Leg C Dujarier —p 31
Diaphragmatic Hernias L Prat —p 43

Suboccipital Pott's Disease in Adults —Tuffier has applied the Albee technic in seventeen cases of this kind Necropsy eight months later in one woman showed that the bone insert had slipped to one side where it was held quite firm with fibrous bands This shows the importance of preparing the bed for the implant so that it cannot possibly slip out, and he advises making the bed amply long enough, down to the seventh cervical vertebra

Circular Suture of Brachial Artery —Roussiel adds three personal cases to the seven he has found on record The operation failed in only three and this was on account of the extent of the war wound

Pseudarthrosis of the Leg —The pseudarthrosis was in the leg in twenty-four of Dujarier's total 130 cases He operated by the Albee technic and fracture occurred in the bone transplant in three cases This warns he says that some support had better be worn for a year at least Consolidation was complete in *four to four months in 90 per cent of the* leg cases but in one case in which the leg had not been immobilized the patient being kept merely in bed, there was no trace of consolidation in two months and a further operation was necessary

Journal de Medecine de Bordeaux

May 25 1920 **91** No 10

Pathogenesis of Fracture of the Skull A Laubie —p 255
Total Anterior Tarsectomy R Villar —p 265

June 25 **91** No 12

*Ipecac in Infants' Dyspepsia R Saint Philippe —p 315
Local Application of Streptococcus Antiserum in Dermatology L R Montel —p 319
Streptococcus Antiserum in Pleuropulmonary Disease and in Sepsis Cheyrou —p 321
Surgical Treatment of Chronic Constipation Bardon and Coiquaud —p 323
Attitude of the Profession Toward Labor Strikes Involving Public Utilities P Tissie —p 328

Ipecac in Digestive Disturbances in Infants —This article was summarized on page 136 when it appeared elsewhere

Journal de Radiologie et d'Electrologie, Paris

January 1920 **4** No 1

*Radiotherapy of Uterine Fibromyomas A Beclere —p 1
Roentgenography of Upper Femur F Arcelin —p 12
*Radiotherapy of Hypertrophied Prostate Haret —p 19
Pneumoperitoneum in Radiodiagnosis L Mallet and H Baud —p 23
Anthracosis with No Physical Signs C Picheral —p 34
Radiography of Lower Jaw Leulero —p 36

Roentgen-Ray Treatment of Uterine Fibromyomas — Beclere's work in this line has been repeatedly mentioned in these columns He has applied this treatment in well over 400 cases preferring mild weekly doses of about 3 H units never over 3½ and postponing the sitting if the skin shows the slightest trace of inflammatory reaction

Roentgen-Ray Treatment of Hypertrophied Prostate — Haret insists that when there is merely glandular hypertrophy radiotherapy is logical and may rapidly reduce the size of the gland but when there is hyperplasia of connective tissue radiotherapy is not of much benefit He gives the details of eleven typical cases remarking that as the patients stop coming when they are relieved complete return to normal size is seldom realized

Lyon Medical

June 25 1920 **129**, No 12

*Dorsal Tender Point with Liver Colic R Pauly —p 517

Dorsal Tender Point with Liver Colic —Pauly found constantly in twenty-one cases of pain in the liver that there was an extremely sensitive point in the fourth or fifth right intercostal space, about half way between the spine and the spinal margin of the scapula The pain on pressure at this point is sharper the severer the liver colic, and it disappears when the gallstone disturbances subside into a latent phase The pain cannot be mistaken for neuralgia as it is not so close to the spine as the latter This tender point could not be discovered in three cases of gastric ulcer two of Laennec's cirrhosis of the liver in a case of simple catarrhal jaundice, acute appendicitis or secondary cancer of the liver The histories of the total thirty cases are appended

Lyon Chirurgical

March April 1920, 17 No 2

Pseudarthrosis of the Humerus G Cotte—p 153
*Immobilization of Sacro Iliac Articulation J Hertz—p 199
*Purulent Pericarditis M Durand and P Wertheimer—p 206
*Epigastric Hernia Barthelemy—p 217
Thoraco Abdominal War Wounds Two Rare Cases Bolognesi—p 223
*Bone Growth Near Cartilage Implant Policard and Murard—p 228
*Fistula into the Colon Guilleminet and Guerin—p 232
*Evolution of Wounds of Vessels R Leriche and A Policard—p 242
*Ligation of Brachial Artery R Leriche and A Policard—p 250

Fixation of Sacro-Iliac Joint—Hertz gives an illustrated description of a method of driving a bone peg into this articulation which immobilizes it completely and stimulates osteogenetic power He has recently applied it in three cases for suppurating sacrocoxalgia, and in a fourth case after the suppuration had subsided The bone insert healed in place without the least drawback, and experiments on the cadaver confirmed the solid fixation that can be realized by this means

Drainage of Purulent Pericarditis—Durand and Wertheimer report prompt and complete cure of a streptococcus infected hemopericardium after a stab wound treated by incision and drainage through the space left by resection of the seventh costal cartilage and lower portion of the sternum

Epigastric Hernia—Barthelemy noted in his thirteen cases of epigastric hernia that the round ligament was frequently adherent to the opening, traction from this was responsible for the symptoms common with this form of hernia

Bone Growth with Cartilage Graft—Policard and Murard report a case and cite others on record in which a cartilage implant led to actual bone production in the adjacent connective tissue, a lump of bone forming

Fistula Into the Colon—Guilleminet advocates direct resection of the parts involved in a large suppurating fistula, without wasting time on preliminary measures to divert the course of the feces

Traumatic Lesions of Vessels—Leriche and Policard discuss the physiologic factors involved in the arrest of hemorrhage in an injured vessel and in secondary ulceration of the vessel They ascribe the latter to changes induced by the proteolytic substances secreted by the leukocytes attracted to the spot The microscope may reveal a scrap of thread or of the clothing in the vessel wall

Ligation of Brachial Artery—Among the practical conclusions of this analysis of the results after high ligation of the brachial artery are that the artery should be ligated in the lower third also, just above the branching of the inferior internal collateral Otherwise this collects and wastes blood in a useless blind pouch But ligation of the brachial artery should be avoided whenever possible, it is dangerous here The artery should be sutured instead of ligated Suture is not necessary, however, for lesions lower down, ligation here does not interfere with the nourishment of the arm in the same way

Medecine, Paris

July 1920 **1**, No 10 Digestion and Nutrition Number

*Diseases of Digestion and Nutrition Lortat Jacob—p 581
*Alimentary Factors in Diabetic Acidosis M Labbe—p 590
*Glycemia as Guide in Diabetes F Rathery—p 593
*Examination of Fasting Stomach P Carnot—p 598
Different Forms of Nervous Anorexia H Surmont—p 605
Leanness and Symptomatic Emaciation J C Roux—p 606
Pancreatic Dyspepsia A Cade—p 610
Angiocholitis and Infectious Jaundice M Garnier and J Reilly—p 612
*Recent Ideas on Jaundice M Villaret—p 617
Scurvy in Infants G L Hallez—p 623
*Insufficiency of the Liver P Brodin—p 625
Constipation G Vitry—p 629

Diseases of Deranged Digestion and Nutrition—Lortat-Jacob reviews the progress of the last six years in this line It is mainly in our better knowledge of the vitamins, of amebiasis, spirochetal jaundice and diabetes insipidus war skull wounds having cleared up much of the obscurity in regard to nervous polyuria Improvement has been realized in some cases of pituitary diabetes by pituitary treatment but the improvement was transient He adds that the more common use of the duodenal tube is further progress as this throws light on conditions in that important crossroads in the body He refers to the large number of cases of amebic dysentery in France, an aftermath of the war, and recalls that diarrhea is not a feature of dysentery, constipation is the rule Like other protozoal diseases malaria and syphilis, it may require treatment for months and years An amebic abscess in the liver may develop insidiously, the rapid loss of flesh and a diffuse ache in the enlarged liver almost the only signs The onset of spirochetal jaundice is frequently accompanied with diffuse and sometimes intense muscular pains and a meningeal reaction Contagion may occur during the weeks following the convalescence, the urine containing at times large swarms of spirochetes

Dietetic Factors in Diabetic Acidosis—Labbe relates that, in his tests the acetonuria declined in diabetics fed with abundance of butter while it increased when the diet contained much meat Butter, olive oil and cream have serious advantages in the diet in acidosis, up to 100 gm of butter can be given to a *diabetique acidosique* without harm Oatmeal days, etc, owe their usefulness to the lack of proteins especially of meat protein The albuminoids of meat, he continues consist mainly of ketogenous amino-acids, while those of vegetables contain much less of these Hence he advocates legumes as contributing to maintain the nitrogen balance without the ketogenous amino-acids It is possible that diacetic acid and oxybutyric acid are not so important from the pathogenic standpoint as we have been assuming They reveal the acidosis but other products may be primarily responsible for it This assumption is sustained by the disturbance in protein metabolism and the considerable quantities of amino acids and of residual nitrogen eliminated by diabetics with nitrogen denutrition

The Blood Sugar in Diabetics—Rathery reiterates that repeated determination of the sugar content of the blood is important both for the prognosis and the treatment The variation in the glycemia, determined before and after ingestion of a test amount of glucose and the fluctuation of the glucose threshold, are extremely instructive When the threshold fluctuates readily, the glycosuria can usually be kept under control by dieting, otherwise not

The Fasting Stomach Content—Carnot gives the interpretations of the findings liable to be encountered when the content of the fasting stomach is examined

Nervous Anorexia—Surmont appeals to the general practitioner to be on the lookout for nervous anorexia lacking proper treatment it may entail serious disturbances This usually monosymptomatic neurosis is encountered at all ages even in infants and in the aged, in both sexes, and in all classes of society It is frequently liable to be mistaken for cancer pernicious anemia, diabetes, suprarenal insufficiency or pulmonary tuberculosis

Pancreas Dyspepsia—Cade emphasizes that while the diagnosis of pancreas dyspepsia is based on analysis of the stools negative findings do not exclude it

Acute Angiocholitis and Infectious Jaundice—Garnier and Reilly comment on these two distinct chapters of the pathology of the liver although they may be associated Most of the micro organisms capable of generating the infectious jaundice do not thrive in bile, the icterohemorrhagic spirochete and the pneumococcus are killed by addition of 1 per cent bile to their cultures The streptococcus seems to be the only exception Even the typhoid group are seldom involved They encountered only four cases in which typhoid or paratyphoid bacilli seemed to be responsible for the infectious jaundice in a total of 1 300 cases of the latter during a recent three year period It is usually a secondary invasion

Jaundice—In referring to spirochetal jaundice Villaret says that treatment is mainly symptomatic, diuretics (lactose drinks hexamethylenamin) baths to reduce fever, and venesection with uremic symptoms Cases have been observed recently at Paris The jaundice which occurs after arsphenamin treatment is usually mild, and does not always require suspension of the drug but we must be on the watch for it and direct treatment according as the jaundice is due to superposed infection flaring up of the syphilis or too intensive treatment

Insufficiency of the Liver—Brodin explains that the liver frequently suffers in the course of infectious diseases although not to a degree that entails jaundice This insufficiency can be remedied, he asserts, by giving an extract of the whole liver This, in powder form, is preferable to preparations of bile as the latter are liable to entail enteritis

Nourrisson, Paris

May 1920 **8**, No 3

*Ordinary Diarrhea in Infants Fed on Cow's Milk A B Marfan—p 129
*Syphilitic Jaundice in Infants G Blechmann—p 145
*Anemia with Splenomegaly in Infants G L Hallez—p 154

Treatment of Diarrhea in Infants Fed on Cow's Milk—Marfan gives minute directions but emphasizes that rules must not be too absolute in dietetic treatment of infants, the directing principles must be adapted to each individual case Restriction to water for one or two days and gradual resumption of the feeding are the main points never forgetting that fluids must be supplied to the amounts the child was taking daily in health, that is about 125 gm per kilogram of weight for infants less than a year old and above this a liter at least Buttermilk made for medicinal use as he describes effectually combats diarrhea The fresh milk is sown with a little sour milk from the day before and set aside for twenty-four hours, then skimmed churned for forty minutes, passed through a fine sieve, 30 gm of sugar per liter are added, and 10 gm, about a tablespoonful, of rice gruel (creme de riz) and a pinch of salt, and the whole slowly heated to boiling point, taking twenty or twenty-five minutes stirring constantly with a cream whip

Syphilitic Jaundice in Young Children—Blechmann presents evidence that inherited syphilis is often responsible for different forms of jaundice in infants which have hitherto been ascribed to other causes or even regarded as physiologic Early rachitis affecting predominantly the skull is strongly suggestive of inherited syphilis as also early adenoids, early enlargement of the spleen and bilateral enlargement of an epitrochlear gland Congenital strabismus if convergent, and early convulsions are also suggestive The frequent cure of habitual vomiting of breast-fed infants under mercury lactate is further illuminating, and intracranial hemorrhages during delivery suggest a special vulnerability of the cerebral vessels for which syphilis may be responsible In any event he concludes, jaundice calls for scrupulous investigation and if other signs of syphilis can be detected he advises intravenous injection of arsenical salts, possibly by the jugular or epicranial veins

Splenomegaly with Anemia in Infants—Hallez' study of pseudoleukemic splenomegaly is accompanied by reports of two grave cases

Paris Medical

July 3 1920 **10**, No 27

*Cardiovascular Disease in 1920 P Lereboullet and J Heitz—p 1
Auscultation of Pulmonary Stenosis Gilbert and Chabrol—p 12
Treatment of Syphilitic Aneurysm of Aorta W Oettinger—p 15
How and When to Give Digitalis O Josue—p 17
*Auscultation of Arteries L Gallavardin and L Tixier—p 25
Diagnosis of Tricuspid Insufficiency P Ribierre—p 31

Recent Progress in Cardiology—Lereboullet and Heitz say in this annual review of progress in diseases of the heart and vessels that the Pachon oscillometer has won an important place not only in general practice but in neurologic and psychiatric investigation and in the operating room and maternity It reveals the apparent death of the newly born, and allows estimation of the heart action of the parturient It shows not only the maximal and minimal blood pressure but also the condition of the peripheral circulation and the relative vasoconstriction of different arteries and throws light on their anatomic state They cite further the occasional regulation of irregular heart action by quinin One case has been reported in which auricular fibrillation yielded to quinin but in some other cases the results were negative Clerc and Pezzi have recently reported that quinin has a tendency to slow and depress the myocardium and the blood pressure, and thus is a true antagonist to epinephrin They warn further that with asystole the Ambard ureosecretory constant must be interpreted with reservations

Auscultation of Arteries—Gallavardin and Tixier apply auscultation to determine the ascending phase of the arterial pulse and describe how it is possible to detect the gaps caused by aortic stenosis thus adding another peripheral sign to the semeiology of aortic stenosis

Presse Médicale, Paris

July 17 1920 **28**, No 49

*Asthma in Infants A B Marfan—p 481
*Physiologic Sosias in Human Pathology H Frenkel—p 483
Application of Tincture of Iodin to the Eye L Chemisse—p 486

Asthma in Infants—Marfan describes a typical case in an infant of 8 months with diffuse bronchitis Small doses of potassium iodid kept up for months or years have proved useful to ward off the tendency, but for the attack itself subcutaneous injection of epinephrin in artificial serum, once or twice a day has been remarkably effectual in his hands on several occasions The dyspnea can be combated with a mixture of equal parts of syrup of codein and syrup of ether, a teaspoonful three or four times a day, and burning an antiasthma powder in the room (The syrup of codein of the French Codex contains 0 2 per cent codein while the syrup of ether contains 2 per cent ether)

Physiologic Doubles in Human Pathology—Frenkel uses and defines the term 'sosie" as a "person who has a striking resemblance to another' and applies it to a series of physiologic conditions the exaggeration or transformation of which would constitute a morbid entity and also to a series of physiologic conditions which have merely a superficial resemblance to certain pathologic conditions He reviews the field of both types

Revue Medicale de la Suisse Romande, Geneva

June 1920 **40** No 6

*Tuberculin in Therapeutics Jaquerod—p 333
Lethargic Encephalitis V Demole—p 352 and p 353
Occupational Poisoning with Phosgen Irene Gerber—p 356
Pneumococcus Thyroiditis and Prevesical Abscess Kummer—p 362
Ingestion of Gram of Cocain Bonjour—p 368
Historical Instances of Sudden Blanching of Hair C G Cumston—p 384

Tuberculin Treatment.—Jaquerod recalls that immunization to a certain extent against tuberculosis can be obtained naturally and artificially and hence vaccination of man is no idle dream To date it has not been fully realized but tuberculin treatment reenforces the resisting powers and usually, in the course of months slight improvement may be counted on if the forces of the organism are still capable of opposing resistance to the infection The tuberculin is merely an adjuvant but his fifteen years of experience with it have demonstrated its efficacy in many cases He warns that in tuberculosis every physical trauma no matter how insignificant, augments the virulence of the bacilli and reduces the resistance of the cells in the foci He reiterates that repose is indispensable in treatment of the tuberculous They must avoid all work, all sports and everything that induces fatigue Tuberculin must never be given in amounts large enough to induce an appreciable reaction in the focus It probably always acts on the focus but this action must never be pronounced enough to be clinically apparent The diagnostic importance of tuberculin is sustained anew by his three cases in which supposedly healthy persons gave a positive ophthalmoreaction but, as they never showed any signs of tuberculosis, no attention was paid to the findings of the test until three years, six and eight years later extremely severe tuberculosis became manifest He adds that it would be absurd to treat for tuberculosis every one giving a positive skin or intradermal test but that this should be the rule when tuberculin tests elicit exaggerated positive responses

Occupational Phosgen Poisoning—Gerber's patient was a manufacturing chemist, with two men he was experimenting with phosgen passing it through alcohol Each felt some irritation after several hours' work but the two men soon threw off the conjunctivitis and cough The other after four hours of slight symptoms showed signs of pulmonary asphyxia progressing to a fatal termination the twenty-fourth hour

Schweizerische medizinische Wochenschrift, Basel

July 8 1920 **50**, No 28

Lethargic Encephalitis in Children E Wieland —p 581
Hemoglobinuria after Influenza G Huber Pestalozzi —p 590
Emphysema in Influenza A Glaus —p 593
Lethargic Encephalitis T Schaeppi —p 595

Policlinico, Rome

June 21 1920 **27**, No 25

*Sugar Content of the Blood S Silvestri and G Aiello —p 643
Epidemic Encephalitis V Ronchetti —p 646

Determination of Sugar in the Blood—Silvestri and Aiello warn that the presence of creatinin in the blood may interfere with tests for sugar, as in pathologic conditions the creatinin content is exaggerated Bang's micromethod, on the other hand, is difficult and has several sources of error They describe what they say is an improved technic, first applying Folin's sodium tungstate and phosphoric acid method to obtain a protein-free blood filtrate and then a modification of Bertrand's method after adding 10 mg of glucose to the filtrate The normal average fasting, from a number of persons on the hospital diet was 0 78 and 0 70 per thousand in the total blood and 0 84 and 0 78 per thousand in the plasma In a case of diabetes, the figures were 2 70 and 3 per thousand Their test requires 2 c c of blood

June 1920 **27** Medical Section No 6

Recent Progress in Field of Malaria T Pontano —p 193 Cont'd
Hemoglobinuria in Malaria C Moreschi —p 216

June 1920 **27**, Surgical Section No 6

Resection of Rectum for Cancer in Man of Twenty R Botteselle —p 169
Proculture and Seroculture A Cassuto —p 174 Cont'd
*Acute Dilatation of Stomach P Gilberti —p 180
*Operative Treatment of Gastric Ulcer D Giorgacopulo —p 187

Acute Postoperative Dilatation of the Stomach—Among the various causes to which this postoperative complication has been ascribed, Gilberti cites suprarenal insufficiency and reports a case in which the transient benefit from epinephrin and the cheesy process discovered in the suprarenals at necropsy seemed to point to this etiology He agrees with those who regard acute hyposuprarenalism or the flaring up of the chronic as the common basis for the postoperative disturbances credited to the anesthetic, or to infection or irritation of the peritoneum or sympathetic system The practical conclusion is that epinephrin is called for in all postoperative complications except those from mechanical traction

Gastro-Enterostomy Versus Resection for Gastric Ulcer—After long discussion of this subject the author's verdict is that resection is undoubtedly the operation of the future Its only disadvantage is the high mortality, and time is constantly reducing this

Riforma Medica, Naples

June 5 1920 **36**, No 23

*Slow Malignant Endocarditis E Ruggeri —p 522
Convalescents Spinal Fluid in Treatment of Lethargic Encephalitis C Cantieri and R Vegni —p 525

Slow Malignant Endocarditis—Ruggeri reports a case in a young man who had had at the age of 15 an attack of acute febrile rheumatism which had left a well compensated aortic insufficiency At 20 superposed infection transformed the clinical picture to that of chronic endocarditis with irregular fever and *Streptococcus viridans* was found in pure culture in the blood No drugs to date have modified the course of this slow endocarditis but a few communications suggest the possibility of serotherapy

June 12 1920 **36** No 24

Case of Jaundice Following Influenza S Corinaldesi —p 542
*Double Acquired Athetosis C Todde —p 544
Deep Congenital Angioma of the Neck P de Tommasi —p 548
Mastoid Versus Vertebral Suppuration G Molinari —p 550

June 19 1920 **36** No 25

Operative Intervention in Cases of Hypochondriac Delirium G Milone —p 562
Perforation of Meckel's Diverticulum F d'Agostino —p 565

Double Acquired Athetosis.—Todde reports the case of a young woman who developed athetosis accompanied by pain in the lumbar region and contractures interfering with swallowing chewing and speaking The extremely severe condition has persisted almost stationary during three years to date The constant incoordinated involuntary movements subside somewhat in repose and almost entirely during sleep To control the tendency for the head and shoulder to jerk backward the young woman sits and stands with her back against the wall or other support By exclusion, Todde accepts some lesion in the cortex complicated with chronic changes in the spinal cord and nerves This would explain the exaggerated knee-jerk Babinski sign neuralgic pains, trophic changes in certain muscles paresis of the extensor muscles of fingers and toes and the muscular spasms The inability to speak distinctly is evidently due to contracture of the muscles involved

Differentiation of Mastoiditis and Pott's Disease—Molinari emphasizes the occasional difficulty in distinguishing between suppuration in the mastoid and a tuberculous process in the vertebrae below while opposite treatment is required for the two Roentgen-ray findings may be the only instructive guide

Rivista Critica di Clinica Medica, Florence

May 25 1920 **21**, No 1

*Syphilitic Lesions in Stomach A Furno —p 169 Begun in No 14 p 157

June 5 1920 **21** No 16

Disappearance of Systolic Murmur with Mitral Insufficiency G Galli —p 181

Gastric Syphilis—Furno emphasizes that a syphilitic origin for stomach disturbances should be suspected when the pains are exclusively nocturnal and there is anacidity, also when there are symptoms of gastric ulcer with hypoacidity and low digestive power Plastic linitis should also suggest the possibility of syphilis, and likewise hour-glass constriction of the stomach He declares that normal or exaggerated gastric chemistry excludes the possibility of a gastric syphilid, but he never omits a tentative course of treatment as for syphilis in every case of gastric tumor before resorting to radical measures

Archivos Españoles de Pediatría, Madrid

March 1920 **4** No 3

*Meningitis in Nurslings C Pelfort —p 129
Intravenous Medication Through Longitudinal Sinus J Bravo Frias and J A Alonso Muñoyerro —p 140

Meningitis in Nurslings—Pelfort reports five cases of meningitis in young infants The pneumococcus or streptococcus was cultivated from four of the cases the other was of tuberculous origin The infants were from 22 days to 10 months old, and none survived

Brazil-Medico, Rio de Janeiro

May 8 1920 **34** No 19

*Correction of Femoral Hernia A Brandao Jr —p 293
Surgical Aspects of Chronic Constipation J Monjardino —p 297

May 29 1920 **34** No 22

Mathematical Expressions of Muscular Work M Ozorio de Almeida —p 339
Normal Horse Serum in Treatment of Anthrax Cassio de Rezende —p 340
*Simple Stain for Malarial Parasite N B Gonçalves —p 341

Treatment of Femoral Hernia—Brandão has worked out on the cadaver a technic for herniotomy which, he says, has the advantages and none of the drawbacks of both the femoral and the inguinal methods but he has had no opportunity to apply it in the clinic as yet The incision passes from a little outside of the neck of the hernia to the external ring of the inguinal canal and the region is exposed as for an inguinal hernia down to Cooper's and Gimbernat's ligaments The lower lip of the incision is then drawn down until the anterior wall of the femoral canal is exposed and the hernial sac is then pushed up to the inguinal canal and treated there as if it were an inguinal hernia The femoral canal is then closed by bringing together the lower margins of the transversalis, the obliquus internus, Cooper's ligament and the aponeurosis of the pectineus

Stain for Malaria Parasite.—This article is republished in No 24 as it contains several misprints

Gaceta Médica de Caracas

April 15, 1920 **27**, No 7

*Wandering Spleen L Razetti —p 79
*Surgery of Stomach L Razetti —p 79
Pneumogastric and Lumbar Plexus Neuritis Salom —p 83
*Neuro Amebiasis C E Salom —p 86
*Beriberi C E Salom —p 87

April 30 1920 **27**, No 8

Methylene Blue in Therapeutics C E Salom —p 94

Spleen in Right Iliac Fossa—Razetti found that the supposed ovarian tumor in the right iliac fossa was the spleen with a twisted pedicle more than 20 cm long He says it is the first case of the kind in Venezuela and the first splenectomy

Surgery of the Stomach—Razetti concludes this lecture with an appeal to physicians not to wait for more than one two or three months in cases of gastric or duodenal ulcer if no improvement is manifest under medical measures but call in the surgeon at once

Neuro-Amebiasis—Salom emphasizes the importance of differentiation of neuritis for which amebic dysentery is responsible Emetin offers a prospect of cure except in the fulminating form in which a fatal termination is the rule unless the heart can be sustained and respiration maintained with amyl nitrite and similar measures until the effect of the emetin becomes apparent

Beriberi—Salom remarks that beriberi is one of the great scourges of his state, Bolivar in Venezuela A change of climate should be advised in every case of beriberi even if the change is only to a short distance Moderate exercise on foot and a nutritious diet should be ordered, with nerve tonics, diuretics if there is a tendency to edema, and tonics for the heart and respiratory apparatus The paralytic and edematous forms get well with mere change of climate, but the fulminating cases are usually promptly fatal Beriberi patients should be kept apart from others

Deutsche medizinische Wochenschrift, Berlin

Feb 26 1920 **46**, No 9

Treatment of Influenza F Kraus —p 225
Acute Yellow Atrophy of the Liver E Fraenkel —p 225
Pathogenesis of Acquired Hemolytic Icterus C Lewin —p 228
Record of Effect of Drugs on the Heart E Weber and A Sperling —p 232
Heart Findings in Illuminating Gas Poisoning H H Zondek —p 235
*Aids in Disease of the Intestine Ganter and van der Reis —p 236
Treatment of Lung Tuberculosis with Silicic Acid Kesseler —p 239
Bone Transplantation M Katzenstein —p 240
Methods of Estimating the Work of the Heart F Klewitz —p 242
Heart Output per Beat G Wiedemann —p 243
Hygiene and Social Hygiene H Reiter —p 243
Dermatologic Hints for General Practitioner M Joseph —p 244

Acute Yellow Atrophy of the Liver—Fraenkel had lately the opportunity of examining directly the liver of two living subjects while suffering from acute yellow atrophy, and he agrees with Umber to the extent that the acutely atrophic living liver differs in its macroscopic appearance from the acute atrophic liver of the cadaver but his findings do not confirm the conclusions reached by Umber in regard to a postmortem autolytic product In Umber's case the patient recovered so he was not in a position to compare his intravital with postmortem findings, whereas in Fraenkel's cases the patients died, so that a direct comparison of vital and postmortem conditions in the liver was possible He adds that more or less ascites was found in over 20 per cent of thirty-three cases of acute yellow atrophy of the liver he has encountered

Estimation by the Plethysmograph of the Effect of Drugs in Heart Disease—Weber and Sperling state that it is not only the cumulative effect of cardiac remedies that may be injurious but that often the first dose exerts a harmful influence for which reason it is important to be able to test he effect of a drug on a patient by the plethysmograph right from the start While the arm is in the plethysmograph jar the foot is vigorously exercised The findings are thus reenforced and are instructively characteristic They add that a subcutaneous injection of 0 5 mg of atropin half an hour before giving the heart tonic sometimes rendered it possible for the first time for the drug to exert the desired action as the atropin reduced the hyperirritability of the vagi

Heart Findings in Experimental Illuminating-Gas Poisoning—Zondek found that in rabbits, illuminating gas produced a dilatation analogous to that observed in man, the auricles especially were affected, and the condition persisted from twenty to thirty hours No anatomic changes of the heart muscle were noted In cats in which the heart muscle is more strongly developed, the dilatation was not observable, which furnishes experimental proof of the role played by the organic predisposition of the heart

Clinical Aids in Diseases of the Intestine—Ganter and van der Reis describe two capsules to be swallowed, and then opened by the action of a magnet from without With one it is possible to take from any part of the intestine material for examination and, with the other to pour out the solution of a drug at any point of the intestinal canal, for local treatment

Deutsche Zeitschrift fur Chirurgie, Leipzig

September 1919 **151** No 3 4

*Operative Correction of Paralytic Drop Foot R Klapp —p 145
Sensibility of Stomach and Intestines A W Meyer —p 153
Stretching the Skin for Plastic Operations A W Meyer and Struckmann —p 164
*Four Fingered Hand E Paul —p 174
Chordoma with Metastases W Peters —p 191
*Actinomycosis of Neck and Brain E Geymuller —p 200
Unusual Internal Hernias P Deus —p 222
Relations between Colitis and Appendicitis F Bode —p 234
*Ascaris Ileus Rost —p 251
*Traumatic Origin of Sarcoma K W Funke —p 262
Aneurysm of Renal Artery O Orth —p 272

Operative Correction of Drop-Foot—Klapp gives an illustrated description of a case in which he restored functional use of the foot by arthrodesis The foot was slit horizontally from end to end through soft parts and bones into the tibiotarsal joint, thus turning back a tongue-shaped flap comprising nearly the entire dorsum The dorsum flap did not fit into place as the foot was brought up to a right angle as this shortened the expanse The end of the flap was cut off to fit to the raw surface, and it was fastened with periosteum and periosteum tendon sutures The patient was a girl of 17 and the paralysis dated from a febrile disease at the age of 7 The foot after the operation was placed in a cast Morphin was required for the severe pain at first but in three months the girl was walking on the foot which had consolidated with solid arthrodesis Klapp ascribes the success of the intervention mainly to the displacement of the tops of the numerous bones and joints bringing sawed joints in contact with raw bone surface The tops of all the metatarsal joints had been included in the flap Kirschner has recently reported a similar operation to gain access to all parts of a diseased foot

Sensibility of Stomach and Intestines—Meyer experimented on twenty-six cats and states that the walls of the stomach and intestines and the serosa covering them did not display the slightest sensibility to adequate stimuli but traction or manipulation of the mesentery always elicited responses showing sensibility

Stretching the Soft Parts with Plastic Operations—Meyer and Struckmann comment on the large amount of skin and soft parts that can be loosened and drawn up from below for reconstruction of the chin and lips and be held there by traction applied long enough To ensure this they run two skewers from side to side through the skin of the chin the ends of the skewers fastened parallel in a frame The traction on the frame is by means of threads fastened to a long spring projecting from a headpiece

Malformation of the Hand—Paul theorizes to explain the causes of the malformation of the wrist with a four-fingered hand

Actinomycosis of Central Nervous System.—Geymüller reports from Basel a case in which the diagnosis of a tuberculous process in the atlas was corrected to actinomycosis by puncture of a swelling in the neck, disclosing actinomyces Similar cases on record are compared with this As the lesions are multiple, surgical measures are of little use

Ascaris Ileus—Rost had occasion to operate last year in five cases of abscesses in the bile apparatus caused by

ascarides, and in five cases of ascaris ileus In two of the latter there was no mechanical obstruction in the bowel, and he was able by experiments on animals to determine that total extracts of ascarides bodies exaggerate the tonus of the bowel of warm-blooded animals, while an extract of the skin of the helminths has the opposite effect This throws light on the spastic conditions found with clinical ascaris ileus, the spasm of the bowel is strictly localized in one loop as a rule All his patients with ascaris ileus complained of violent abdominal pains The tonus-reducing property of the ascaris skin may be responsible for certain functional disturbances in subjects with helminths, possibly contributing to clumping of the helminths

Traumatic Sarcoma—Eunike reports six cases of sarcoma developing at the seat of a trauma, in four it was an occupational injury The importance of the trauma as a factor was unmistakable, but the rarity of the development of malignant disease after a trauma shows that other factors are indispensable

Monatsschrift fur Kinderheilkunde, Berlin

May 1920 **18** No 2

Flour and Butter Porridge in Infant Feeding E Moro—p 97
Prognosis of Tuberculosis in Early Childhood Fichelberg—p 123
Esophageal Stenosis with Multiple Spasm H Ring dorff—p 131
Amaurotic Family Idiocy Starck—p 139
Apparent Motion of Cranial Bones in Infants Petenyi—p 142
Milk Hygiene and Dairy Management W Grimmer—p 144 Concn

Amaurotic Family Idiocy—Starck had an opportunity of observing a typical case of Tay-Sachs' amaurotic family idiocy in a nobleman's family in a Russian Baltic province There was no history of Jewish ancestry The first child and the fourth child—both girls—had died from the disease at 12 months The second child, a boy of 12, and the third child, a boy of 10 developed normally and showed no signs of the disease The fifth child a girl was a year old when seen by Starck, and the indications then were that it could not live long It was peculiar that the disease developed in a very similar manner in all these girls of the family althougn a special sex incidence is not otherwise recorded It was also significant that the parents were apparently healthy and living in easy circumstances

Monatsschrift fur Geb und Gynakologie, Berlin

June 1920 **51**, No 6

*Transverse Stenosis of Vagina H Peters—p 363
Premature Separation of Normally Located Placenta F Lieven—p 377
Forceps Delivery and Viability of the Child A Mayer—p 389
Radiotherapy in 1919 H Wintz—p 415 Concn Summarized p 514

Transverse Stenosis of Vagina—Peters suggests that an obstructing transverse membrane may yield at childbirth and escape detection but in some cases laceration induces severe hemorrhage Neugebauer compiled 1,000 cases of the kind, with delivery by the natural route in 245 but the mortality in this group was 10 55 per cent The laceration may extend into the wall of the vagina and increase the danger of infection Peters recommends excision with suture and ligation of vessels, unless the membrane is thin and delicate but warns that the operation may entail further stenosis later The stenosis was evidently congenital in the six personal cases he reports

Premature Separation of the Placenta—Lieven attributes to pregnancy intoxication this serious complication In the sixteen cases at the Bonn clinic albumin was not evident in the urine except in one case Three of the women barely escaped with life from the severe hemorrhages, and one died as also 56 per cent of the children

Forceps and Fetal Mortality—Mayer analyzes the obstetric experiences at the Heidelberg maternity to decide whether forceps deliveries are responsible for deaths which might have been avoided by adopting other measures Forceps were applied in 1 35 per cent of 5 914 deliveries and 3.23 per cent of the children died during delivery or in twenty-four hours afterward, and 3 8 per cent were stillborn The statistics from twenty German maternities show that forceps were used in about 3 97 per cent of all the deliveries In compiling statistics he urges to omit from the calculations all the newborn less than 35 cm in length and weighing less than 1 500 gm, as these belong in a separate group

Munchener medizinische Wochenschrift, Munich

Feb 6 1920 **67**, No 6

*Irradiation of Superficial Carcinomas Seitz and Wintz—p 145
*Effect of Cholelithiasis on the Stomach C Rohde—p 150
*Intravenous Strophanthin Therapy H Roderburg—p 152
Malaria in Moun ain Region Von Neergaard—p 155
Granuloma of Venereal Origin W H Hoffmann—p 159
Factors Determining Sex G Rittershaus—p 162 Idem F Lenz—p 164
*Sulphosalicylic Acid Test for Albumin Schall—p 164
Taenia as Cause of Acute Appendicitis W Krieger—p 165

Irradiation of Superficial Cancers—Seitz and Wintz state that while it would seem that cutaneous and subcutaneous carcinomas ought to be easily cured because they are so easy to reach, such is not the case and give as the reason that they can be irradiated from only one angle It is easy to kill the topmost layer of carcinoma cells that lie next to the tube, but as these carcinomas usually penetrate the deeper tissues and commonly have considerable lateral extension the more distant cells receive an insufficient dose or sometimes only a stimulating dose Carcinoma of the uterus on the other hand owing to its central location can be irradiated from six or seven different angles which makes the prognosis more favorable

Effect of Cholelithiasis on the Stomach—Rohde finds that with a tendency to gallstones hypoacidity is usually present as the result of the loss of the function of the gallbladder When hypoacidity is noted after removal of the gallbladder, it is therefore not the result of the operation as it had preceded the latter With chronic cholelithiasis the stomach and duodenum may change their shape and position, as can be seen with the roentgen rays In many cases there are at the same time motor disturbances from adhesions between the gallbladder and neighboring organs Patients are however seldom much affected in their general health by these changes If operation is in any wise indicated cholecystectomy, with or without a T drain is always to be preferred to any more conservative operative method as it is a question of removing a gallbladder that is entirely useless from the physiologic and functional standpoint while the operation protects the patient against further evil consequences which might result from retention of the organ

Intravenous Strophanthin Therapy—Roderburg states that intravenous strophanthin is indicated in mild cardiac insufficiency of whatever origin (vitium myocarditis hypertonia), but that it is not adapted for combating circulatory insufficiency following acute infectious diseases When indicated, it is superior to digitalis by mouth or vein as is especially noticeable in cases of the type of congested liver Certain cases of dropsy of nonrenal origin are not influenced by strophanthin and yield only to theobromin preparations The strophanthin injections are absolutely harmless even with very high blood pressure and in the final stages of chronic nephritis In fact he says severe cardiac insufficiency associated with nephritis s more liable to be influenced by the intravenous use of strophanthin As an initial dose he recommends not more than 0 5 mg and often uses not more than 0 3 to 0 4 mg The maximal dose is from 0 75 to 1 0 mg The intervals should be at least twenty-four hours and are usually from two to five days He has thus treated about 100 patients in the last eight years

A Source of Error in the Sulphosalicylic Acid Test for Albumin in Urine—Schall reports that sulphosalicylic acid when combined with urine containing large amounts of calcium produces a precipitate which so closely resembles albumin as to cause confusion The precipitate is however, denser than any sediment or other clinical findings Control tests with other albumin reactions heating or previous dilution of the urine serve to avoid diagnostic errors

June 11 1920 **67** No 24

Clinical Anatomic and Etiologic Aspects of Disease Nomenclature F Marchand—p 681
Influenzal Pneumonia Treupel and Kayser Petersen—p 686
Epidemic Encephalitis W Cohn and [illegible] p 688
No Uniform Carcinoma Di[illegible] Journal

*Stain for the Color Blind for Tubercle Bacilli K W Jotten and P Haarmann —p 692
Diabetes Insipidus with Serous Meningitis A Foerster —p 694
Minimal Food Requirements of Man W Prausnitz —p 696
Sunlight in Relation to Malaria Recurrence I Lenz —p 697
Air Embolism Following Metreurysis with Normally Located Placenta Recovery F Lichtenstein —p 699
Eczema Resulting from Sweat Band Schemel —p 700

Comparison of Recent Staining Procedures for Tubercle Bacilli—Jotten and Haarmann commend their modification of the Spengler method for the demonstration of tubercle bacilli After the smear has been stained in the usual manner, with carbolfuchsin solution it is decolorized (twenty seconds) with a 15 per cent nitric acid solution It is then briefly rinsed and again treated for ten seconds with nitric acid, rinsed again and afterward counterstained for about thirty seconds in Spengler's picric acid-alcohol mixture (saturated aqueous picric acid and absolute alcohol, equal parts) The smear is again rinsed and allowed to dry and is now ready for microscopic study Out of 170 sputum specimens the Ziehl-Neelsen method yielded fifty-nine positives and the Spengler original method gave sixty-one, whereas the modification just described furnished sixty-two positives Furthermore, the average number of bacilli visible in the field was thirty-one for the modification twenty-six for the Spengler original method and only thirteen by the Ziehl-Neelsen method

Wiener klinische Wochenschrift, Vienna

Feb 19 1920 33 No 8

Epidemic Choreiform Encephalitis L Dimitz —p 163
Clinical Types of Lethargic Encephalitis J Gerstmann —p 165
Intermittent Choked Disk and Abducent Paralysis with Influenza or Lethargic Encephalitis E Urbantschitsch —p 166
Studies on the Action of Nucleins III F Habetin —p 168
Developers for Instantaneous Roentgenograms J M Eder —p 169

Zeitschrift fur Kinderheilkunde, Berlin

1920 25, No 4 6

*The Metabolism in Rachitis P Grosser —p 141
The Blood Picture and Platelets in the Newly Born E Slawik —p 212
*Immunity of the Newly Born to Diphtheria F von Groer —p 227
Criticism of the Tubercle Bacillus Partial Antigens H Langer —p 232
The Teeth with Congenital Syphilis Lise Davidsohn —p 249
*Inflammation in the Dental Sac in Young Infants M Zarfl —p 266
Diagnosis of Solitary Tubercle in Spinal Cord R Wagner —p 322
*Arhinencephalia Monstrosity Alice Goldstein —p 328

The Metabolism in Rachitis—Grosser devotes seventy-one pages to the metabolic findings and other minute details of experiments on ten infants injected parenterally with different calcium and phosphorus compounds on comparable diets, in an effort to learn which of the different calcium salts are most readily assimilated by the child with a tendency to rachitis He does not draw any general conclusions from the research

Possibility of Diphtheria in the Newly Born—Groer comments on the importance of the passive antitoxin immunity to diphtheria possessed by certain newly born infants Romminger has recently reported that 23 2 per cent developed diphtheria among forty-three newly born known to be carriers of virulent diphtheria bacilli 76 8 per cent showed no sign of the disease Groer has found that the general proportion of the immune is about 84 per cent at birth but drops to 71 9 by the fourth month to 56 6 per cent by the end of the sixth and to 30 per cent by the end of the year Of course if the mother is not able to generate antibodies, the newly born will lack this protection

Inflammatory Process in Dental Sacs in Nurslings—Zarfl gives an illustrated description of six cases of the phlegmonous or osteomyelitic form of inflammation of the dental germ with production of sequesters and discusses the condition from eleven different standpoints The permanent teeth do not seem to be injured by the stormy process in the alveoli, but the first teeth involved are destroyed Recovery is known in only one of the twelve cases on record and a tendency to recovery in one other Erysipelas of the face was the primary disease in some of his cases The prognosis is better in the phlegmonous form, with the primary process in the gums No instance is known of infection of the mother or wetnurse by the child's nursing, but it would be safer to the child with drawn breast milk

Arhinencephalia—Goldstein's study of a monster with the olfactory lobe and most of the hind brain missing seems to confirm the assumption that pressure or traction from the amnion is responsible for such deformities, and also for cyclops monstrosities

Zentralblatt fur Chirurgie, Leipzig

June 12 1920 47, No 24

Exclusion of the Jejunum in Treatment of Jejunal Ulcer E Polya —p 585

Zentralblatt für innere Medizin, Leipzig

May 15, 1920 41, No 20

*The Clinical Significance of Cylindroids F Eigenberger —p 354

The Clinical Significance of Cylindroids—On the basis of examination of 81 cases of uncompensated heart disease Eigenberger reports that his results confirm the views of von Jaksch and Quensel who ascribe to cylindroids a certain clinical importance as signs of disturbance of renal circulation Eigenberger could demonstrate cylindroids in 36 or 44 per cent of his 81 cases In most of the cases in which cylindroids were present there were strong clinical signs of disturbed renal circulation In 2 of the cases with large numbers of cylindroids, necropsy disclosed marked renal stasis

Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

May 29 1920 1 No 22

Introduction to Study of Physiology G van Rijnberk —p 1906
Medical Service in British Aviation Department P M van W Palthe —p 1920
*Heterochromia P J Waardenburg —p 1929
*International Scientific Terms J E. Schulte —p 1941
Unusual Causes of Ileus J F O Huese —p 1944

Heterochromia.—Waardenburg compares the various theories in regard to diversity of color in irises, and describes 7 cases in which it accompanied paralysis of the sympathetic nerve In his 73 cases of heterochromia in man in 37 only one iris showed a diversity of coloring In 5 there was melanosis of one eye and in 6 there were other anomalies in the eye

International Scientific Terms—Schulte expatiates on the international character of medicine as a science and as an applied art Other sciences, law perhaps chemistry etc have a more national character, but medicine is preeminently international—its object being to help the sick man regardless of all other circumstances He refers with envy to the time when all scientists were familiar with Latin, half of Boerhaave's students were foreigners from all parts of the civilized world and all were equally at home in his lecture room Medicine in particular he says needs international terms as it is not a finished structure but is being built up by contributions from all lands, and the easier the intercourse between workers, the more rapidly the building proceeds New ideas call for new terms to express them and the names given to new discoveries are accepted at once the world around like 'telephone,' 'automobile' etc The new names may not please the purists, he quotes Anatole France's remark 'Diseases, the horror of man, have names that are the horror of the philologist" The anatomists Schulte adds, are fortunate in having internationalized the terms they use

Ugeskrift for Læger, Copenhagen

June 17 1920 82 No 25

*Familial Pernicious Anemia E Meulengracht —p 777

Familial Pernicious Anemia—Meulengracht relates that four of the sons in a family with thirteen children and the son of one of the daughters developed typical pernicious anemia Three of those affected have died Achylia was found in the three whose stomach content was tested He suggests that possibly an inherited predisposition to achylia may have been the primary factor In any event, the familial occurrence confirms the assumption of one or more endogenous factors